BIZCOMMUNITY

Quantity surveyors support value engineering

By Larry Feinberg

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For those in the construction industry the term quantity surveyor is commonly known. But, a quantity surveyor's function is not always understood. To illustrate the value of this key function we take a look at green buildings.

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The role of a quantity surveyor (QS) is to quantify and manage the various cost items of material, labour, plant and equipment, which make up the total cost of a construction project. A QS is a professionally registered advisor who provides a value add service, from the feasibility stage of a project right through to completion. And, in the two key areas where construction projects typically go wrong, e.g. budget and project completion date overruns, a proactive QS will save the contractor and their client both time and money.

Familiar with public and private sector procurement strategies, they can be rather useful in getting past the hiccups that usually occur when procurement procedures are unfamiliar. With setting up budgets their forte, this can be a distinct advantage when preparing large, complex tenders, and even small ones too.

But why go green?

Climate change is no longer a speculation but a reality in our lives. As populations grow bigger and urbanisation grows cities at an unprecedented rate, with local authorities building upwards and not outwards, this concentration of people and the conveniences of life impact our natural environment – aggravating climate change even further. The construction and operation of modern buildings, those in which we will live and work, are responsible for the consumption of many of our natural resources, and the generation of carbon and other gases that cause global warming. In the Unites States, to which South Africa’s major cities can draw a parallel, buildings account for 39% of total energy use, 68% of total electricity consumption, 30% of landfill waste, 38% of carbon dioxide emissions and 12% of total water consumption.

Environmental benefits

Going green has a number of environmental benefits. But what does going green mean? In a nutshell, it means that we, as humanity, pursue the knowledge and practices that will lead to more environmentally friendly and ecologically responsible decisions and lifestyles, which will help protect the environment and sustain our natural resources for current and future generations. Among the benefits are enhancing and protecting biodiversity and ecosystems; improving air and water quality; reducing waste streams; conserving and restoring natural resources.

Economic benefits

But, it's not just environmental benefits that are created by going green. There are a number of economic benefits to add to the equation. With a little savvy one can achieve a reduction in building operating costs, e.g. wastewater reuse in air conditioning systems and solar power, or energy from waste, an improvement in occupational productivity, the enhancement of asset values, and in profits due to lower operating costs, and the optimisation of economic life-cycle performance.

Social benefits

And, it doesn't stop there. The social benefits of going green include the improvement of domestic, occupational and leisure health and comfort through greatly improved indoor and outdoor air quality, lighting and temperature control, improved landscape aesthetics in minimising local utility infrastructure and a general improvement in our overall quality of life - because our natural environment will be less impacted.

How quantity surveyors can assist the green revolution

Against this background the Green Building Council of South Africa (GBCSA) and the Association of South African Quantity Surveyors (ASAQS) assisted by the University of Pretoria (UP) conducted a study on Green buildings in South Africa to determine the costs and trends associated therewith. The study focused on two primary aspects, "green design penetration" which indicates the extent to which green design influences the different elements of a project, expressed as a percentage of the total project budget, and "green cost premium" which is defined as the additional cost of Green building over and above the cost of conventional construction, expressed as a percentage of the total project cost.

Interestingly, there was a slight difference in the results obtained for the three major economic hubs, and a correlation between the green cost premium and green design penetration. Design penetration was found to be slightly higher in the Western Cape (46%) versus Gauteng (41.8%), and KZN (40.4%), while the average cost premium in the Western Cape was at 6.9%, 6.0% in Gauteng and 4.5% in KZN. After taking all factors into account, such as location, size, Green Star certification level, etc., the overall average green cost premium was found to be 5.0%.

According to Manfred Braune, chief technical officer of the GBCSA, the study was undertaken to analyse the actual cost premium of building green in South Africa and to challenge the belief that green buildings cost much more than conventional buildings.

“South Africa has seen exponential growth in certified green buildings, from the first Green Star SA building in 2009 to 165th in June 2016. Despite this there are many more buildings that could go green but are not doing so,” Braune said.

Accurate cost projections

By using a professionally qualified and experienced QS, preferably a member of the Association of South African Quantity Surveyors, a building owner will be given an accurate projection of the costs involved in a green building construction project, or the conversion of a traditional building to a green building, as well as having a highly effective cost strategist in the team to help lower costs through ideas, substitutions and experienced advice. This will certainly lead to increased certainty that the building phase will be finished on time and within budget; ensuring that value for money is attained by the client and a value added to the project through a unique blend of construction knowledge, advice on strategic and cost planning and the procurement of construction products and services.

If, as a building owner or construction company, you are looking at the viability of a future project, a QS can look at the demographics of the project and advise on its feasibility – before any substantial costs are incurred. In drawing up plans, a QS will give an accurate determination of the materials needed and the costs involved, including labour, for each aspect of the construction project. And, if required, and in order to reduce costs wherever possible, and permissible, an analysis of the specifications can be carried out. This circumspect analysis can be equally applied in the evaluation of tenders and tender submissions.

Value engineering

It’s here, within the context of a construction project, that the value of a quantity surveyor has been highlighted. And, in addition, the importance of green buildings has also been highlighted. We know that green buildings, or what we alternatively refer to as sustainable design, is a best practice in increasing the efficiency of a building and its use of energy, water and materials, as well as to reduce building impact on human health and the environment over the entire life-cycle of the building. This is known as ‘value engineering’, and quantity surveyors are the people to help in making this become a reality – saving you time and money in the process.

ABOUT THE AUTHOR

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