# BUILT ENVIRONMENT ECONOMIST

## AUSTRALIA AND NEW ZEALAND


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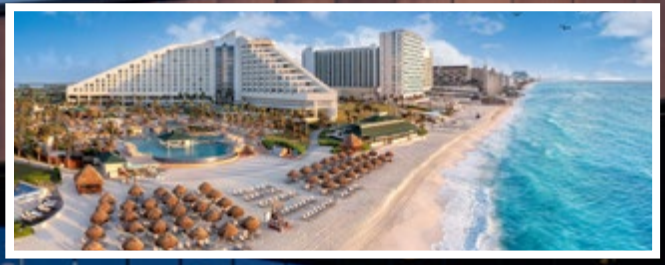

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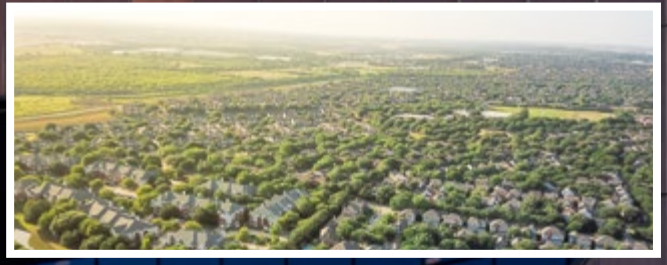

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The Built Environment Economist is the flagship publication of The Australian Institute of Quantity Surveyors (AIQS). Produced quarterly, the Built Environment Economist seeks to provide information that is relevant for quantity surveying and construction professionals, as well as asset owners.

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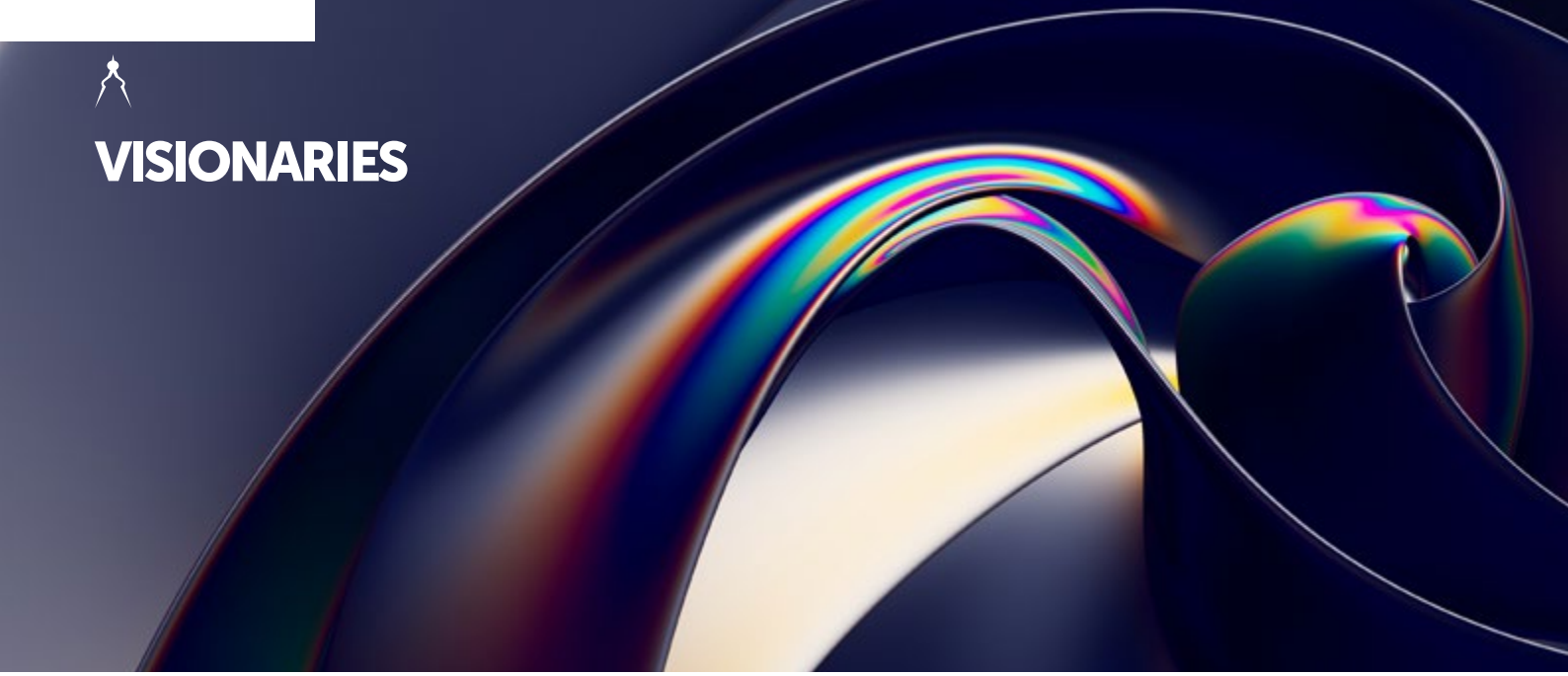
# VISIONARIES



## STEPHEN BALLESTY FAIQS, CQS

*Built Environment Professional, In-Touch Advisory*

"We shape our buildings, and afterwards our buildings shape us" Winston Churchill's much-used 1941 quote referred to the need to rebuild and restore London in the face of WWII air raids. But this quote points to the simple truth that buildings are more than merely shelter.

Our Built Environment – including buildings, infrastructure, and utilities – provides for functional spaces, asset values, cultural heritage, and social interactions that contribute to wellbeing; it is a societal enabler that defines us.

We are all experiencing an 'age of transformation' that impacts our industry in many ways. Change is not just constant; it seems to be relentless. Just a few examples range from procurement arrangements and building information modelling (BIM), through data analytics, drones, and remote working to environmental, social and governance (ESG) reporting, big data, automation, climate change, mandatory disclosure, workplace strategy, service delivery, and wellness principles. For many, the current focus is on the long-term implications of the circular economy and generative artificial intelligence (AI).

The role of the quantity surveying (QS) profession, historically concerned primarily with capital cost and contractual matters related to construction projects, continues to expand across sectors and throughout the facilities life cycle.

Routinely, the modern quantity surveyor's input is being sought on whole-of-life issues on new developments and existing facilities alike, from procurement, life cycle cost planning, risk assessment, asset management, operational performance, carbon emissions, embodied energy, and value engineering. Changing stakeholder priorities, practice standards and increased automation of traditional QS tasks provide a diversity of new demands and opportunities for the QS profession in terms of the why, what, when, and how we contribute to the solutions.

Now in 2025, in the face of urgent global challenges, such as those framed by the UN's Sustainable Development Goals (SDGs), our Built Environment industry finds itself grappling with the requirements for sustainability, resilience, and adaptability, and the need for liveability and affordability.

These principles apply to all sectors, with 'cost' in all its forms remaining a key metric at all life cycle phases and project stages from planning and design, through construction delivery, to asset/facilities management of our Built Environment. The quantity surveyor's skills in data capture, analysis, costing, and forecasting have never been more relevant in establishing budget certainty, managing risks, and delivering value.

Hence, the quantity surveyor will continue to be an influencer in the making of informed decisions that contribute to achieving a more productive, sustainable, and liveable Built Environment for all.

# ALIGNING PROJECT COST

## VALUE ENGINEERING OR COST REDUCTION?

By Chris Wragg MAIQS

# VALUE ENGINEERING

It is a common theme when working on construction projects for the quantity surveyor to engage in value engineering options. But what is value engineering, and how does it differ from cost reduction? This is a subject experienced by many practicing quantity surveyors at the request of the employer, and with expectations that the quantity surveyor will ensure costs align with the employer's available budget and project financing.

Value engineering has various definitions and interpretations, but is simply defined as achieving improved design, construction, and cost-effectiveness. In undertaking value engineering exercises, a systematic method of improving the value of a project is adopted by reviewing and analysing costs, identifying opportunities for cost reductions, and ensuring that quality, specification, performance, and employer requirements are maintained. Materials, designs, the use of technology, and construction methods can all be considered to optimise performance without compromising functionality or prescribed standards.

But in reducing costs and attempting to maintain standards – are such requests considered value engineering, or are they merely an exercise to omit elements of the design? Or, to significantly reduce elements of the building and quality standards? In considering options of cost alignment within the budget, a different methodology can unconsciously evolve. Often misinterpreted as value engineering, this methodology is *cost reduction*.

Being the custodian of the cost report, the quantity surveyor is best placed to identify where costs exceed budget and highlight elements requiring further evaluation.

Potential alternatives in construction methodology or different uses of materials can be identified that perform equally or better than those specified. Whilst such proposals can be welcomed and embraced as a viable and reasonable solution by the employer, the success of identifying and implementing cost-effective alternatives does not solely rest with the quantity surveyor. It is a collaborative exercise, involving all project stakeholders including architects, engineers, quantity surveyors, the employer, and the contractor.

The design team's contribution is of paramount importance in the selection of alternative materials that adhere to specifications whilst providing aesthetic compliance, ensuring design intent is maintained. Designers can suggest alternatives for consideration, proactively seeking out value for money.

But what if they do not wish to compromise on their designs or specified materials? This is a common challenge, but through stakeholder engagement, clear communication, transparency in the cost report, and the demonstration of the positive effects of using alternative products, this challenge can be eased with the buy-in of designers and employers, generating sensible solutions for the project.

But what about cost reduction, and can this be considered a viable solution for aligning cost and budget? Cost reductions can be realised through the use of cheaper products and by compromising design and the employer's requirements.

However, cost reductions may not bring any other benefit to the project other than to align cost and budget, and may reduce fabric quality and project standards.

Value engineering is not about cutting the work scope, downgrading the specification, reducing quality or functionality, or putting short-term cost savings ahead of the building's longevity. Value engineering is about optimisation and adding value without compromising quality. Careful consideration must be provided when evaluating value engineering options.

Many successful projects integrate the management of the asset into the design and construction phases and consider lifecycle costings and operational benefits when comparing value engineering options. Whilst elements of the work can undergo value engineering reviews, operational benefits such as early completion, revenue generation, and reductions in maintenance and operational costs may not be evident in the construction budgets but are crucial to consider in the decision-making process.

Value engineering must not be confused with cost reduction, and for an optimum project outcome, solutions must be identified as early as possible, clearly communicated, reviewed with all stakeholders and a decision made to implement value engineering into the works at the earliest stages of the development, and without affecting programme or delaying the project.

This article was written by Chris Wragg MAIQS from BWA Middle East.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