

BUILT ENVIRONMENT ECONOMIST

AUSTRALIA AND NEW ZEALAND



BUILT ENVIRONMENT ECONOMIST

AUSTRALIA AND NEW ZEALAND



04 VISUAL FEATURE: TĀKINA WELLINGTON CONVENTION & EXHIBITION CENTRE



11 PROCUREMENT FOR THE BRISBANE OLYMPICS: NAVIGATING THE FUTURE OF CONSTRUCTION



22 DRIVING STRESSED MEGAPROJECTS TOWARDS SUCCESSFUL COMPLETION



29 REVOLUTIONISING HOUSING WITH AI AND MODERN METHODS OF CONSTRUCTION

CONTENTS

- 2 CEO Letter
- 4 Visual Feature: Tkina Wellington Convention & Exhibition Centre
- 10 Visionaries
- 11 Procurement for the Brisbane Olympics: Navigating the Future of Construction
- 14 Aligning Project Cost: Value Engineering or Cost Reduction?
- 16 Navigating Variations: A Quantity Surveyor's Legal and Commercial Roadmap
- 20 Q&A - How do You Utilise Your Skills to Make the Built Environment More Sustainable?
- 22 Driving Stressed Megaprojects Towards Successful Completion
- 29 Revolutionising Housing with AI and Modern Methods of Construction: A Path to Net Zero
- 32 Emotional Intelligence in Teams
- 34 Analysing Disruption on Construction Projects
- 37 Managing Multi-Contract Disputes with a Multi-Party Agreement
- 38 Understanding Assets and Costs Builds Certainty for BTR Investors
- 41 Building Cost Index (print version only)

About

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.

Subscribe

At the AIQS website you can purchase a copy of this edition or subscribe for 12 months.

ISSN

2652-4023

Contribute

AIQS encourages readers to submit articles relating to quantity surveying, the built environment and associated industries including: construction economics, cost estimating, cost planning, contract administration, project engineering.

If you would like to contribute, email marketing@aiqs.com.au.

Advertise

Contact AIQS to discuss available opportunities.

Georgia Baidon

Communications and Marketing Coordinator
T: +61 2 8234 4000
E: marketing@aiqs.com.au

This edition was edited and designed by Georgia Baidon.

Credits

Images: Adobe Stock (unless otherwise stated).
Cover images: Jason Mann Photography.

Disclaimer

AIQS does not take any responsibility for the opinions expressed by any third parties involved in the writing of the Built Environment Economist.



ALIGNING PROJECT COST VALUE ENGINEERING OR COST REDUCTION?

By Chris Wragg MAIQS



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.



ADVANCING BUILT ENVIRONMENT
COST PROFESSIONALS

Level 4, 35 Clarence Street,
Sydney, New South Wales, Australia 2000
+61 2 8234 4000

www.aiqs.com.au

