

OMAINTEC – 2019

Value Engineering : A Decision Making Tool for Facility Management Options – Australian Practice!

Dubai , UAE

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Facility Management – Overview

Facility management is predominantly a people –oriented, customer-focused industry, and as a profession is one that seeks to help organisation and individual achieve their goals .

Every day facilities managers face a myriad of expectations and problems that challenge their professional skills and knowledge. In particular, in recent years the focus has been on the efficient operation of Australia built environment, requiring Facility management to manage reductions in expenditure while improving on environmental performance, notably in the area of energy efficiency.

Increasingly Facility management need the skills to deal with day to day issues while strategically planning for the further, finding new and better ways to manage their facilities . To achieve this recognised skills standards and development linked to educational pathways and a clear understanding of career levels are becoming vitally important to the future of the industry .



OPAL TOWER INVESTIGATION FINAL REPORT

**Independent Advice to
NSW Minister for Planning and Housing**

19 February 2019

Opal Tower Investigation – Final Report

8. Other hob beam / panel elements of similar as-constructed, structural design may not comply with the NCC and AS3600-2009 and, if so, will require rectification works. We also recommend checking of the forces in other structural elements adjacent to the hob beams, such as the columns.
9. We agree *in principle* with the rectification works planned to date, noting that these have advanced considerably since our interim report was released but have yet to be agreed by all parties and independently certified.
10. We recommended that a detailed analysis be undertaken of the potential redistribution of loads from the damaged elements to ensure that other newly loaded building elements, before and after rectification works, have suitable capacity and to avoid future damage. A preliminary analysis has been carried out and indicated structural loads satisfied the NCC in the non-damaged parts of the building structure. Nevertheless, this finding should be robustly and independently verified.
11. We recommend that all designs and construction associated with the rectification works be checked and certified as safe for building occupancy by qualified independent structural engineers.
12. The viability of residents re-entering the building extends beyond the structural issues considered here and hence beyond the scope of this investigation. Nevertheless, we would recommend that items 9-11 listed above be completed prior to re-occupation.

TOR 3 – How to avoid this type of incident in the future

We recommend the following should be implemented:

13. The creation of a government Registered Engineers database developed in partnership with an appropriate professional body.
14. Independent third party checking and certification of engineering designs and subsequent changes to the design of critical elements by a Registered Engineer, including confirmation of what are the critical elements for all major construction projects.
15. Critical stage, on-site checking and certification by a Registered Engineer that construction is as per the design for all major construction projects. All changes to identified critical structural elements that are proposed and made during construction should also be certified by an independent Registered Engineer.
16. An online database be created, where all certifications may be viewed by a broad range of stakeholders including owners and prospective owners; before, during and after construction. The aim is to increase transparency of the approval and certification process.
17. A Building Structure Review Board be formed, with the major purpose being to establish and publish the facts relating to structural damage of buildings arising from design and construction, investigate their causes and to recommend changes to Codes and Regulations where appropriate.

RIGHT
LANES
MUST
TURN
RIGHT

PACIFIC HIGHWAY
Hornsby
Berowra B83



KEEP LEFT



NO RIGHT TURN

KEEP LEFT





Value Engineering Approach

Different Definitions

Value Engineering / Methodology is a systematic process used by a multidisciplinary team to improve the value of a project through the analysis of its functions.

Or VE/VM process comprises technique that enables the project team to provide the highest value product , projects, processes , and services to the customers .

Or A specialized cost control technique which performed by group of independents and highly experience individuals in order to achieve the functional balance between Quality , Performance , and cost for any project , system , or facility .

Value Methodology

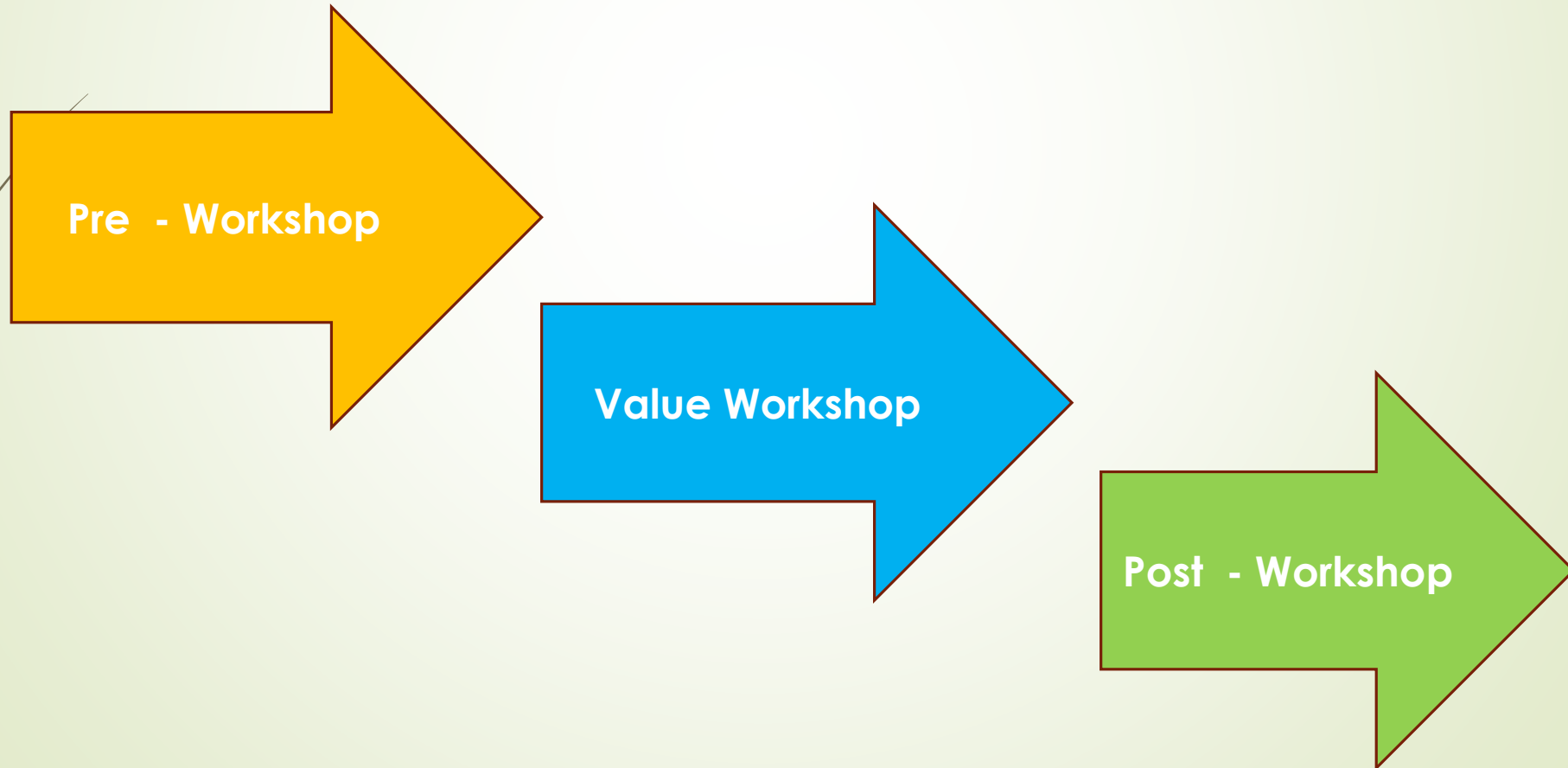
(Value Analysis – Value Engineering – Value Management)

Australian Standard

- 1- Prepared by Standards Australia Committee OB – 006 Value Management to supersede AS / NZS 4183: 1994.
- 2- Provide guidelines for application of Value management to products , processes , services, systems and organizations .
- 3- Defines terms , establishes the essential elements of Value management and clarifies roles and responsibilities .

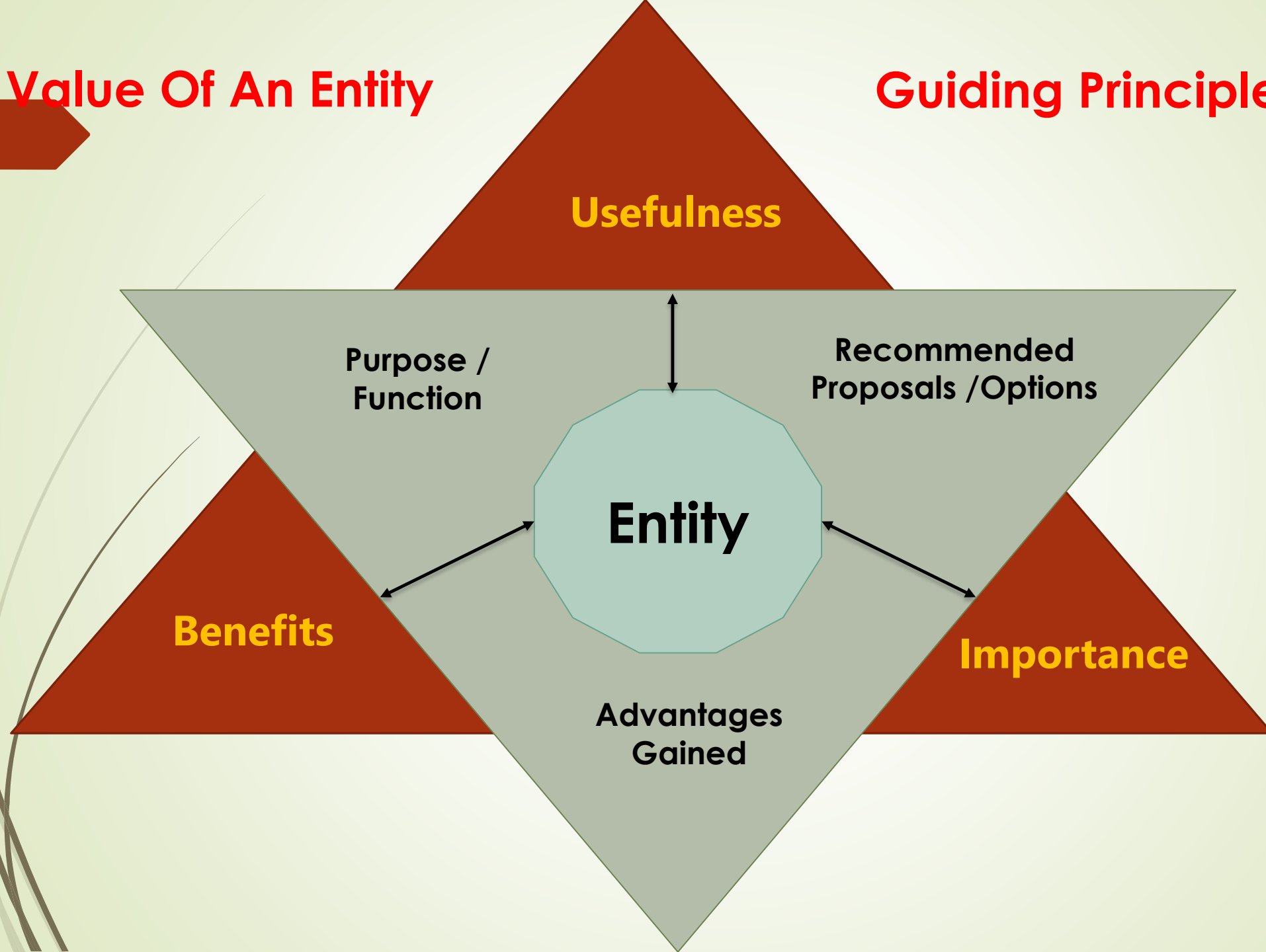
Value Methodology – SAVE (USA)

Value Methodology Job Plan



Value Of An Entity

Guiding Principles



Value Methodology – International Standards

Value management is a structured and analytical process in which a prescribed Work Plan is followed to achieve best value and best value for money in products , processes, services , systems and organisations.

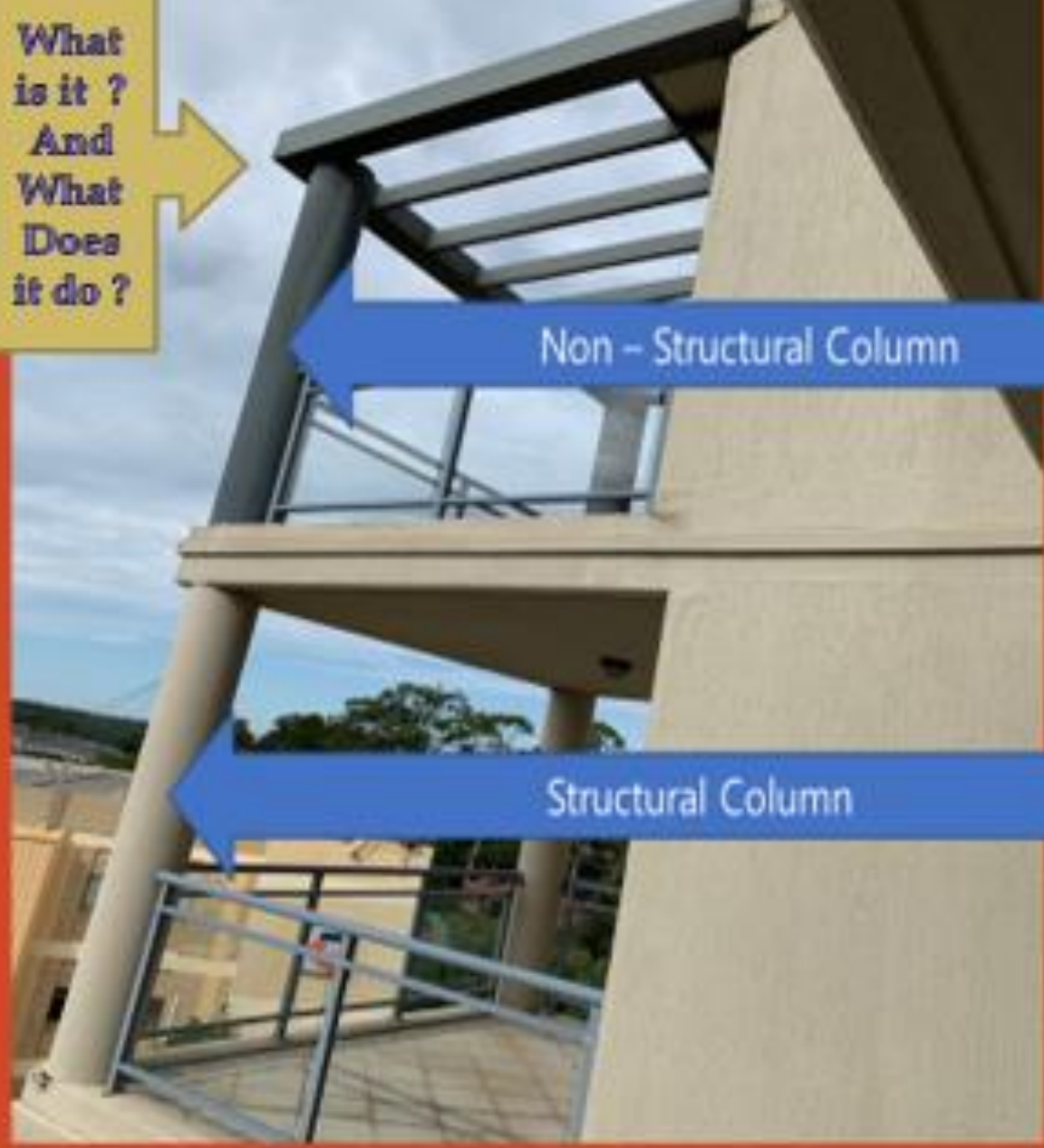
Australian Standard

Value Engineering is a specialized cost control technique which performed by a group of people who are highly experience and independent in order to achieve the functional balance between Quality , Performance and cost for any project , product or system .

American Standard



What is it ?
And
What Does it do ?




Non - Structural Column

Structural Column

Functions

Verb + Noun
Occupy Space ?
Secondary Function

VERB + Noun
Carry Load
Basic /Essential Function



The 5 main questions in Value Engineering



What is it ?



What does it do ?



How much it costs ?



How much it worth ?



Value index

1- What is it ?

2- What Does it Do ?

3- How Much It Costs ?

4- How Much It Worth ?

5- Value Index





The decision Options

Alternatives

Criteria Analysis Matrix

Weight of Importance (0-10)

3.0

4.0

3.0

2.0

10.0

5.0

4.0

Winner

1	Yellow Stone - Original	9	12	12	6	40	20	4	103
		3	3	4	3	4	4	1	
2	Porcelain	6	8	12	8	30	15	16	95
		2	2	4	4	3	3	4	
3	Terracota	6	8	12	8	30	20	4	88
		2	2	4	4	3	4	1	
4	Riyadh Lime Stone	12	16	15	8	50	20	20	141
		4	4	5	4	5	4	5	
5	Granite	15	20	15	8	40	25	8	131
		5	5	5	4	4	5	2	
6		0	0	0	0	0	0	0	0
7		0	0	0	0	0	0	0	0

5 - Excellent

4 - Very Good

3 - Good

2 - Fair

1 - Poor