

President's Message

Complexity And Value For Money

There are so many aspects of projects, programs, systems, products or services that can affect 'value for money'.

One of those aspects is complexity which always has a price tag, but it's usually not immediately obvious.

It's a couple of years or more since I wrote about this subject in these Value Times articles, and so in this article, I'm going to refresh and re-focus on the subject.

For many years, I've taken keen interest in the matter of complexity and, in particular, how complexity factors affect 'value for money' in major projects.

Going back a few years, this subject occupied quite a bit of my time whilst undertaking my PhD research, and I'm glad that I put in the effort, for during that time, I set in place thought processes and practices that continue to this day in seeking out best 'value for money' in any situation.

Project sponsors, planners, engineers, architects, builders, procurers and specifiers all face challenges in dealing with complexity. It comes in many shapes and forms, sometimes being inherent to individual situations and sometimes as a direct consequence of decisions or human actions.

No matter the size of the project you're working on, somewhere along the line, the matter of 'complexity' will likely raise its head in one way or another.

What is it? How do we recognise it? How do we deal with it? What effect does it have on planning, design and construction? How does it affect 'value for money'?

Whilst working on my PhD, I drew upon the work of Professor Nicholas Rescher, University of Pittsburgh. Indeed, it was his analysis of complexity that I used to provide a framework to examine the complexity of several major infrastructure projects.

In his book 'Complexity', Professor Rescher makes this observation:

There is no agreed upon definition of 'complexity' any more than there is one for a 'chair'. In both cases alike we are dealing with one of those things that we can generally recognise when we see them, but cannot readily pin down with some straightforward adequate verbal formula. And while we can usually compare things of the same general sort in point of complexity, we certainly do not have anything like an across-the-board measure of complexity to compare the complexity, say, of stories with machines. What we do know is that complexity is the inverse of simplicity. The latter is a matter of economy, the former of profusion.

Professor Rescher's observation gives us a starting point: complexity

*"Variety's the very
spice of life, that gives
it all its flavour."*

William Cowper (1731-1800)

(characterised by profusion) is the inverse of simplicity (characterised by economy).

Following this line of thinking, a major hospital project – planning, design, construction, commissioning and running – will present an example of high complexity whereas a warehouse building comprising portal frames and tilt-up walls presents an example of simplicity. Between these two extremes can be found most projects that we are likely to be involved with.

There are many factors that influence the extent of complexity in any situation, and in this article, I'll deal with two of them: the number and variety of components.

The number of elements or components certainly affects complexity but the fact that there might be a large number of components does not, of itself, create complexity.

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Consider, for example, the thousands of bricks or blocks in many "simple" buildings – nothing complicated there, despite the large number of components. However, identifying the number of components is the starting point in determining the extent of complexity.

How many physical components are there? How many connections? How many points of ingress and egress? How many stakeholders? How many authorities? How many rules or regulations? How many governing authorities?

William Cowper (1731-1800) coined the phrase "Variety's the very spice of life, that gives it all its flavour." Nowadays, the phrase is usually abbreviated to simply "variety is the spice of life", but the whole phrase is pertinent to complexity.

Whereas, as we have seen, complexity is related to the number of elements or components (and sometimes directly a product of that number) it is most certainly "flavoured" or "spiced" by variety. It is here that complexity begins to take shape.

Consider, for a few moments preparing to construct a brick building. If all the bricks are to be the same, then the process should be reasonably straightforward. But let's assume that there is to be some variety in the brickwork, through different types of brick and also different bonding patterns. Now immediately we have increased the complexity of the situation considerably.

The specified variety will create implications for purchasing, delivery,

storage on site, movement of materials on site, choice of bricklayers, the bricklaying task itself, risks of mistakes, supervision, checking and payment.

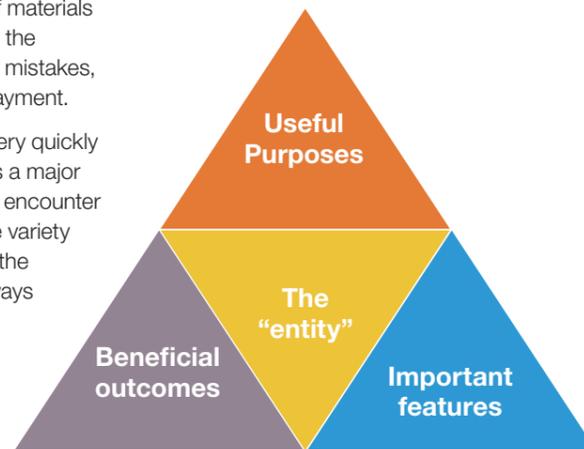
From this example, we can very quickly grasp the idea that 'variety' is a major driver of complexity. We may encounter it in many ways, including the variety of elements or components, the variety of different possible ways of arranging those elements and components in different modes of interrelationship and the variety of modes of operation of the system.

To what extent does all of this affect 'value for money'? Quite a lot, actually.

Even from the examples of complexity that I've briefly outlined in this article, we can see that there are potentially huge costs involved with complex situations whether they be costs incurred in planning, design, manufacturing, construction, supervision, ongoing maintenance, or possibly all of these.

Do such costs represent good 'value for money'? To answer this question, we must refer to our Value Statement, built upon the Value Triangle that describes the primary purposes of an entity, the expected benefits to be accrued by fulfilling those primary purposes and those features that are most important to the client and/or stakeholder group.

If we can show that the complexity elements (as described above) sit within



The concept of "value" as defined in AS 4183

the Value Triangle, i.e. they are important features that contribute to the primary purpose and resulting benefits, then they are likely to support the achievement of best 'value for money'. If, on the other hand, the complexity elements are found to make no contribution to the Value Triangle, then it is likely that money is being wasted, resulting in poor 'value for money'.

This matter of complexity needs to be made explicit when considering options to deliver best 'value for money'.

As a matter of principle, it's worth keeping Albert Einstein's famous quote in mind: "Everything should be made as simple as possible, but not simpler".

But beyond that, if we test the extent of complexity that we can observe against the agreed Value Triangle, then we put ourselves in very good positions to make judgements as to whether or not a particular proposal presents good 'value for money' or not.

Dr Roy Barton
President, IVMA

Achieving value – risk management or value management?

This article is prompted by the recent release of ISO 31000 Risk Management – Guidelines 2018-02 (ISO 31000 2018) second edition. ISO 31000 2018 includes changes involving references to achieving 'value' which is of interest to 'value management' practitioners.

It is asserted this revision should be a trigger for a review of industry use of 'value management' compared to 'risk management', and be a catalyst for generating proposals for lifting the profile and use of 'value management' across industry.

ISO 31000 2018 and Value

The ISO 31000 2018 introduction states the "document is for use by people who create and protect value in organisations by managing risks, making decisions, setting and achieving objectives and improving performance".

The document also states: "The purpose of risk management is the creation and protection of value.

Value management is essential for creating value and ensuring 'value for money'

It improves performance, encourages innovation and supports achievement of objectives".

ISO 31000 2018

In contrast, the first edition ISO 31000 2009 stated: "Organisations of all types face internal and external factors and influences that make it uncertain whether and when they will achieve their objectives. The effect this uncertainty has on organisations objectives is 'risk'".

In the first edition, the 'creation and protection of value' was referred to as a principle of risk management. However, it appears the ISO technical committee might have determined the term 'risk management creates and protects value' is not a principle for effective risk management but rather it might be an outcome

of effective risk management. Hence, the change for 'creation and protection of value' from a principle of risk management to the purpose of risk management.

This article is not intended to critique how effective risk management might be with 'creating and protecting value' but will highlight what value management practitioners recognise, as stated in AS 4183 Value Management – the differentiation between value and 'value for money'. However it should be noted that nowhere in ISO 31000 2018 is "value" or "value creation" defined.

One expects that all projects would create some value and that risk management would help create this value. Also, risk management by its nature would help protect value by managing risks and, for example, minimise delays and financial impacts from risks. But how effective would risk management be in creating and protecting 'value for money'?

When we say 'value for money' this means holistically in a program/project context the following four items:

1. Expenditure is allocated to project(s) which have highest priority for the community or organisation
2. Outputs satisfy the objectives the project(s) is designed to meet (i.e. outputs achieve outcomes for usefulness, benefits and importance – the AS 4183 triangle)

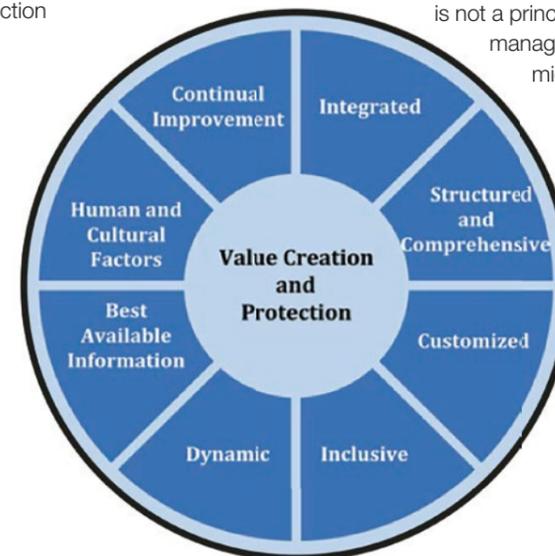


Figure 2 – Principles

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"Everything should be made as simple as possible, but not simpler."

Achieving value – risk management or value management?

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3. Achieving least cost inputs to produce the project outputs
4. Using resources in the best technical way to produce given project outputs.

It is asserted, that the risk management process alone would not effectively achieve and protect ‘value for money’ and the implementation of the value management processes is critical to ensuring ‘value for money’, specifically for achieving items one and two above.

Other program/project management functions would be required to achieve items three and four above and to support outcomes for items one and two.

Industry use of value management

Recognising that ISO 31000 2018 states the purpose of risk management is the creation and protection of value prompts the question – what is the use by industry of value management compared to risk management?

Program/project management plans typically involve headings addressing the project management elements including scope management, time management, cost management, quality management, risk management, human resources management and procurement management and other relevant delivery headings. However, in my experience such headings generally would not address ‘value management’ as a heading.

This is my experience with a current role for risk services involving a program of works where the Program Management Plan (PMP) includes such headings mentioned above but does not have a ‘value management’ heading.

They have no ‘skin in the game’ – they are not using their money to pay for it ...

In fact, the term ‘value’ is only mentioned twice in the PMP. The first in relation to program performance measures which are to be measured against standard project management principles. The term ‘value’ is referred to in the principle: Cost – delivery of a ‘value for money’ solution within the approved budget.

However, for the current issue of the PMP, specific key performance indicators have not been developed and the PMP does not elaborate on the delivery of a ‘value for money’ solution.

The second ‘value’ reference relates to cost management, specifically earned value, which has a loose connection to value management.

So, why is it that ‘value management’ is not given a heading and the attention it deserves. I think the clue to this situation is given above.

The main reason is probably because value management is not a heading in internationally referenced standards such as the Project Management Body of Knowledge (PMBOK) document suite.

Further there is not an international standard for value management unlike ISO 31000 2018 for risk management.

It is understood that program/project directors/managers use the elements in PMBOK as the base structure for

management plans and, in most cases, a plan for achieving ‘value for money’ is missing or is deficient. However, this is not the case for risk management which is usually given due attention in management plans and is implemented through the program/project life cycle.

Conclusion

Risk management may protect value. But value management is essential for creating value and ensuring ‘value for money’.

The author asserts that value management should be incorporated in internationally recognised documents such as the PMBOK document suite and actually practised on projects and programs.

This would raise the profile of value management and result in value management headings in program/project management plans. It would likely follow that program/project directors/managers would defer to value management practitioners for advice on value management processes and achieving ‘value for money’.

Importantly such an initiative would introduce transparency in the delivery of value and ‘value for money’ to the community.

Michael Ord
Director, IVMA

Poor Value for Money

Something that is not ‘valued’ will not deliver ‘value-for-money’! If ‘value’ is not defined up-front, it’s simply not going to be delivered. Everything that flows from inadequate ‘value’ definition is a sub-optimal solution.

We are in a period where there has been a serious loss of focus on delivering ‘value for money’ from public investments. It seems to worsen in the lead-up to elections – with all State, Territory and Commonwealth governments seemingly complicit.

Strategy, governance and decision-making seem to be failing to sustain or deliver strategic outcomes – it seems that too many short-term, ad-hoc and ‘political’ or ‘media’ considerations are dominating in the absence of well defined and shared values.

Purpose(s) are confused and constantly challenged and altered, benefits are over promised and under-delivered, important features are poorly defined (if at all) and expediently set aside. ‘Risks’ are downplayed and often poorly understood and not transparently managed. Just spending the money is presented as some sort of an achievement – as an alternative to demonstrating ‘value-for-money’ outcomes.

Why?

Whatever mechanisms are being used to lead planning and decision-making, they are failing to focus on defining what is of value.

They are failing to take a whole-of-life cycle approach – often “kicking the can down the road” for future generations to bear the real costs without the intended benefits!

‘Risks’ are downplayed and often poorly understood and not transparently managed.

They focus on spending ‘capital’ and ignore the life-cycle costs – not just day-to-day maintenance but the longer-term replacement / refurbishment costs that all asset investments entail.

They have an inadequate appreciation of what is truly sustainable.

They have no ‘skin in the game’ – they are not using their money to pay for it and so are less inclined to worry about ‘value’ or ‘value for money’.

They are taking out their returns early or up-front, leaving the subsequent owners and operators to bear the future costs and leaving the future users to a lack of adequate or affordable performance.

They do not seem to be effectively considering asset life-cycle risks or opportunities.

But most importantly, they adopt an extremely narrow, indeed a parochial view of who the stakeholders are and do not engage all appropriate stakeholders in helping to forge a genuinely shared understanding, and consensus, on what the purpose of the investment is.

They fail to test genuine viable options to find the best ‘value for money’ solution.

Even where they get this right – their execution fails to focus on, or deliver, the intended or originally defined value.

Some examples to demonstrate this concern:

Australia’s New Submarines

Based only on news reporting there must be significant concerns about long-term ‘value for money’ for the Australian community. It’s not so much about the costs of the boats, it’s more about what they are meant to do. If their purpose is maritime defence then we may be a long way short of what’s most valuable about having them.

The extended timetable to adapt a nuclear submarine design for a diesel powered version will not deliver the first new boat until the late 2030s and then it will still take another decade to deliver the rest.

It will be a ‘mini-fleet’ using already ‘old’ technology and with no comparable sources for competitively priced components and servicing. They may have a very short operational life.

There is a serious risk of having no experienced submariners to operate them. Those in the existing fleet will have long retired and the life of the existing boats is unlikely to be extended to cover the gap until the new boats start becoming available.

In 20 years or so from now the “most expensive submarine mini-fleet” maybe

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ready. Those who built them will have retired on huge pensions and a whole new workforce will have to be recruited and trained to maintain them through their potentially short operational life.

What this does to our real defence capability must be of concern. Especially, as we are heading into an era of heightened tensions across our entire region; a period through which may be incapable of projecting an effective maritime defence posture let alone deploy and succeed in an active combat situation if one arose.

The Murray-Darling Basin Plan

The plan is heralded as a mechanism to transform the management and operation of this vital river system – substituting for the previous disconnected inter-state rivalry in the use of its waters. Yet despite billions being spent (and more being committed to be spent) there is no evident improvement; neither environmentally nor economically.

Australia's food production for local and export markets is centered in and dependent on this basin — along with the rural towns and communities that draw their water supplies from it.

What is the purpose of the management plan now? Despite a plethora of stated good intent, it remains mired in politically-charged, conflicting, short-term objectives that weaken the ability to deliver long-term, 'value for money' outcomes.

Instead of coherent strategy, it is presenting as a disjointed suite of ad hoc interventions that do not align with the water resources ebbs and flows or weather phenomena.



Sydney's Powerhouse Museum

There is no shared understanding of its purpose, intended benefits and important features. Only extreme views are being heard and, in the absence of the right balance, the stakeholders who are dependent on the flows for their livelihoods are want to support it because of the harm they are enduring at the worst of times.

Sydney's Power House Museum

The museum is being relocated to Parramatta from Ultimo, where it has been for the past 30+ years. Like all museums it has too big a collection to display any more than a small fraction.

What's driving the move? A desired alternative use of the current

location! (that, by the way, may be a completely justified proposition.)

Is the current planned solution at Parramatta going to deliver best 'value for money'? It's impossible to tell because there is no 'value statement' with clarity of purpose, articulated benefits or important features and certainly nothing from a 'shared understanding' by the key stakeholders.

There is nothing yet presented to the community that defines these 'value factors' as guiding the development planning and implementation.

If the value isn't clear now, will it be any clearer when the project is completed? Or will it be a cost to the whole community and a benefit to a few?

Mark Neasbey
Chair, Education Committee, IVMA

Super power: why the future of Australian capitalism is now in Greg Combet's hands

Right now Greg Combet is arguably the most powerful man in Australia. Recently the former trade unionist and federal politician declared his intention to transform Australian business. His radical idea: to promote the concept of "long-term value".

Combet is chairman of Industry Super Australia, which represents 16 of Australia's biggest industry funds and thus the vast bulk of the A\$630 billion saved by more than 11 million Australians.

These super funds would use their massive clout as investors to transform corporate culture, Combet told the Australian Financial Review. He wants business to focus on long-term sustainability, not be "hostage to the short-term share price or six-monthly profit announcements".

"The energy sector is an example of where long-term thinking is needed," he said. "We have to start making a significant transition from old coal-fired power plants to renewable energy generation and distribution."

But his ambition is much broader than this one controversial issue.

Not that revolutionary

Not everyone is happy about the idea of industry super funds, which have strong links to trade unions, pushing

There is plenty of research to suggest this will be a good thing.

companies to focus on environmental, social and governance performance.

This week the Australian Prudential Regulatory Authority, responding to Treasurer Josh Frydenberg's "urgent" request for guidance on "aggressive union behaviour", warned super funds to keep away from financial activism.

Heather Ridout, a former head of the Australian Industry Group who now chairs the AustralianSuper fund, has told Frydenberg to stop politicising super. Combet says his agenda has nothing to do with "activism".

He's right. His ideas really aren't that revolutionary. In other parts of the world they would simply be regarded as responsible investor behaviour.

Australian super funds have a legal obligation to manage their members' funds for the long term.

Representing "retirement timeframe" interests means super funds want companies to think about how to sustain value over decades.

Up to now this has not necessarily translated into super funds directly and consistently communicating their long-term

interests to company boards. Combet's declaration signals this is going to change.

There is plenty of research to suggest this will be a good thing.

Companies focussed on the long-term are more successful. They prioritise ethical behaviour, customer service, community value, environmental stewardship and other non-financial outcomes. Over the longer term they also have stronger share price growth.

Investors who help companies focus on the long-term thus help themselves. It is a virtuous circle.

But revolutionary enough

According to the ASX Corporate Governance Council, not known for revolutionary subversion, the issues that effective boards must now take into account include "culture, conduct risk, digital disruption, cyber-security, sustainability and climate change". There are others coming.

In the wake of the revelations of the banking royal commission, it would be irresponsible for the heads of superannuation funds

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to sit by as passive observers and not direct boards to these issues.

Globally, institutional investors, governments and companies are working together to move beyond solving specific issues such as corporate social responsibility, sustainability reporting and ethical investment.

In fact, the United Nations Principles of Responsible Investment initiative, boasting more than 7,000 corporate and investor signatories, exhorts investors to go beyond "strictly financial benefits" and engage with companies on environmental, social and governance factors. Integrated approaches are at the forefront of practice.

Australia has been lagging behind. So for Combet to spell-out a clear ambition to harness the power of the superannuation sector for long-term thinking is significant.

Perhaps he senses the opportunity to lead changes to the Australian economy, and

society, that were out of reach during his 19 months as federal Industry Minister.

He wields immense power in a sector with even greater latent power. Australian superannuation assets now total A\$2.7 trillion, and funds own about half of Australian shares.

If Combet can leverage Industry Super Australia's fund bloc to get the ball rolling, the momentum could be truly ground-breaking.

We will now see which of Australia's economic elite join his mission and collaborate in building global momentum. Those who want to resist, or who cannot organise themselves to participate, should know the clock is now ticking.

Danny Davis
Executive Director, Australian Institute of Performance Sciences, and researcher at La Trobe University

This article was published by The Conversation on the 20th of March 2018.

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SAVE INTERNATIONAL
VALUE SUMMIT 
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