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Introduction to Project Alliancing

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1 INTRODUCTION

1.1 General

All major capital works projects involve inherent risks (eg. political or economic change, climate, technology, ground conditions, engineering uncertainties, errors, industrial disputes, land issues, environmental issues and many more). In order to achieve optimal outcomes the project owner must select the most appropriate strategy for managing these risks.

From an owner's perspective the traditional "risk transfer" approach is still the best method for many projects – particularly where the scope is clear and the circumstances and risks are reasonably predictable. However, nowadays more and more projects have to be delivered in an environment of uncertainty – driven by diverse stakeholder interests, shifting business or political imperatives and rapid technological change. The traditional risk-transfer contracting models have increasingly been shown to be inadequate to deal with these circumstances.

In recent years a growing number of owners in Australia have turned to project alliancing to deliver complex projects in the resources, infrastructure and building sectors and the results so far have been very impressive.

1.2 Matching the model to expectations

While the push towards more collaborative contracting practices is very welcome the author believes there is a significant risk that alliancing as a project delivery model will be (unfairly) discredited in the next few years. The early warning signs are already evident.

Word is spreading about the outstanding successes being achieved on alliance projects and many owners are obviously looking to alliancing as a way to achieve similar levels of success on their projects. The problem is that many owners (and their advisers) do not understand the factors that lead to outstanding outcomes on those other alliance projects. Several current projects appear to be adopting so-called "alliance" models that lack some of the core features essential for achieving the kind of "breakthrough" performance that has been achieved on those successful alliance projects.

While these hybrid alliances may perform well it is very unlikely that they will deliver the kind of outstanding behaviours, relationships and outcomes that have been achieved on projects using a "pure" form of alliance model. Ultimately some of these owners, disappointed that the alliancing model failed to live up to expectations, will form, and no doubt spread, the view that alliancing is not all it is trumped up to be. This will be a shame for the industry as project alliancing has far too much to offer all parties to be discarded as just another passing fad.

1.3 Scope / aim of this paper

This paper is intended to:

- give an overview of the background to project alliancing in Australia;
- explain in general terms how project alliancing operates in practice;
- give insights into the factors that drive the kind of success that has been achieved on some alliance projects; and
- dispel some of the more common myths about project alliancing.

The author presented a paper at an industry summit in June 1999 which deals with the mechanics of project alliancing in greater detail.[1]

2 HISTORICAL OVERVIEW

2.1 The traditional "risk-transfer" approach

The traditional approach is for owners to transfer as much of the risk as possible to others – eg. insurance companies, designers and constructors. While this "risk transfer" approach is often appropriate, it can give rise to an adversarial culture that can itself threaten the success of the project.

One of the key recommendations of the *No Dispute*[2] report is that risks under a construction contract should be borne by the party that is best able to manage those risks. Many of the more extreme examples of adversarial conduct in the construction industry occur because the owner, when setting up the contracting arrangements, fails to adhere to this simple principle.

2.2 Improvement strategies

There have been many noteworthy initiatives since 1990 aimed at improving the efficiency of the building and construction industry.

There was a surge of interest in "**partnering**" when it was first introduced to the Australian construction industry in the early 1990's. Partnering, as practiced in the industry, is a process whereby the parties to a traditional "risk transfer" form of contract commit to work together with enhanced communication in a spirit of mutual trust and respect towards the achievement of shared project objectives. It has been used mostly on resource and infrastructure projects with some notable applications in the building sector. In the author's experience industry feedback on partnering is mixed – in summary:

(a) Many examples where partnering is acknowledged to have improved the standard of project administration and delivery.

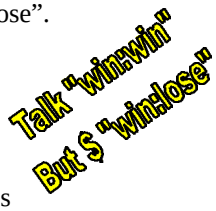
(b) Some examples where both parties have expressed cynicism about the genuineness of the process based on their experiences.

(c) A few notable cases where partnering seemed to do nothing to alleviate adversarial behaviour but served to greatly increase the associated level of bitterness.

In the author's view the overall mixed performance of partnering is not surprising because:

Upside Partnering encourages the parties to focus on people and relationship issues and provides tools for much better communication. Since effective communication is a key element in the success of any project, any process that improves communication is likely to result in improved outcomes.

Downside Partnering tries to impose a culture of "win-win" over the top of a commercial and contractual framework which remains inherently "win-lose". The verbal commitments during the partnering process, even if genuine at the time, are not enough to withstand the stress imposed by gross mis-alignment of commercial interests.



For detailed information and diverging views on project-specific partnering in Australia refer to Cowan[3], CIDA[4], Quick[5], Tyrill[6], Uher[7], and Patching[8].

Some owners have traditionally used **cost-plus contracts** to secure flexibility and co-operation on large complex projects. While many would say this is an effective way to deliver very complex projects the general perception is that the cost-plus model leads to a "B-team" culture, inefficiency and cost blowouts.

In an attempt to secure "cost plus" levels of cooperation while maintaining high levels of efficiency and "A" team performance a number of companies in recent years have turned to cost reimbursable **performance incentive** (CRPI) models to deliver large mine developments. Under the CRPI model the contractor (designer and/or constructor) is reimbursed all of its actual costs plus a guaranteed fixed fee and has the opportunity to earn further rewards (but without any risk) for achieving outcomes beyond the agreed target outcomes. While the CRPI model appears to have contributed to very successful outcomes on several major projects in Queensland it has been used on other major resource development projects around Australia since 1996 with somewhat mixed results.

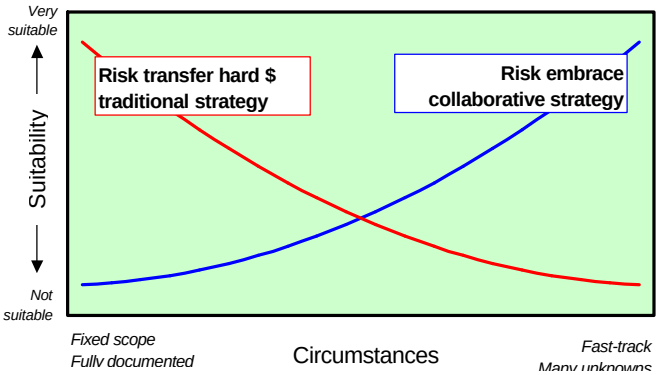
More recently **project alliancing** has challenged entrenched attitudes and practices in the industry. The purer forms of project alliancing in Australia are based on the models used on several successful oil and gas projects in the UK and follow the principles espoused in the CRINE[9] report on the UK oil and gas industry. The CRINE report challenged the entrenched "master-slave" culture that traditionally existed between owners, suppliers, contractors and subcontractors and recommended a radical shift to peer relationships based on mutual respect, trust and equitable sharing of all risks and benefits.

In 1998 the Australian Constructors Association (ACA), a body representing most of the large constructors in Australia, interviewed the chief executives of 34 of the industry's major private and public sector clients to hear their views on how project outcomes could be improved. Based on that research and with widespread support from those client representatives the ACA concluded[10] that the way forward for the industry is *relationship contracting* – which it defined as "*a process to establish and manage the relationships between the parties that aims to remove barriers, encourage maximum contribution and allow all parties to achieve success*".

Project alliancing in its "pure" form as outlined below is at the "top end" of the relationship contracting spectrum.

3 Choosing the Right Contracting Strategy

At the onset of a project the risks that are inherent to that project are "owned" by the owner. The success of the project depends upon how effectively these risks are managed by the owner. In broad terms the owner can choose from a "risk transfer" approach at one end of the spectrum to a "shared risk" approach at the other end, with a variety of risk sharing hybrids in between. It cannot be said that any particular model along this spectrum is the "right" one. The owner must choose a contracting model that is appropriate to the particular circumstances of the project.



As a general guide, where the scope of work and the risks are well defined, the traditional risk transfer approach will generally deliver the best value to the owner. Where there are many unknowns and the risks are ill-defined, a risk embrace approach will usually be more appropriate. Either way the owner's choice should be founded on sound economic principles based on a proper understanding of the nature of risk and behaviour drivers in a design/construction environment. All too often the owner's choice seems to be based on false assumptions as to how effectively risks can be transferred to others despite compelling evidence that risk transfer under certain circumstances is illusory.

All too often the owner's choice seems to be based on false assumptions as to how effectively risks can be transferred to others

It is particularly important for the owner to choose wisely in the first instance because it is usually impractical, or at least very difficult, to convert to a collaborative approach having started off under a traditional risk transfer approach, even where all parties have come to realise that the risk transfer approach was not appropriate.

The rationale for an owner in adopting any type of risk-sharing collaborative approach is that under certain circumstances the owner can better manage its risks by embracing them (rather than simply trying to transfer them) and managing them within a flexible cooperative project delivery environment. A properly informed owner will be able to recognise whether the circumstances suit a risk-transfer or a risk-embrace approach. The owner generally only gets one shot at selecting the right contracting strategy and must choose carefully. [Ross[1] contains a detailed discussion on this topic and suggestions/tools to assist owners in making that decision.]

4 INTRODUCING PROJECT ALLIANCING

4.1 Defining the term / essential features

In simple terms a "project alliance" is where an owner[1] forms an alliance with one or more service providers (designer, constructor, supplier, etc.) for the purpose of delivering outstanding results on a specific project. It should not be confused with other forms of mutually beneficial relationships such as strategic alliances, joint ventures, partnerships, teaming agreements, etc.

There are various types of cooperative contracting models that people characterise as project alliances – eg. some people would consider partnering, cost plus or CRPI contracts to be forms of project alliance. This paper focuses on a particular "pure" form of project alliance, based on the UK oil and gas models used in the early 90's – specifically those that have ALL of the following features:

- ❑ Performance obligations are generally stated to be collective (ie. *the Alliance Participants shall* ….) as opposed to individual (eg. *the Contractor shall*..).
- ❑ Reimbursement to the non-owner participants is 100% open book subject to verification by audit and can be characterised as a 3-limb compensation model:
  - ❶ 100% of what they expend directly on the work including project-specific overheads.
  - ❷ A fixed lump sum Fee to cover corporate overheads and profit.
  - ❸ An equitable sharing of gain / pain depending on how actual outcomes compare with pre-agreed targets in cost and non-cost performance areas – consistent with the guiding principle that "*all parties win or all parties lose*".
- ❑ The project is governed by a "Project Alliance Board" with representatives from all parties who carry full authority to bind the party. All decisions of the Alliance Board must be unanimous.
- ❑ Day-to-day management of the project is by a streamlined integrated project team where members are assigned to the team strictly on a "best-for-project" basis, without regard to which company they are employed by.
- ❑ There is an express commitment to resolve issues within the alliance without recourse to litigation except in the case of "wilful default"[2].
- ❑ The Alliance Participants develop and commit to work within an agreed set of "**Alliance Principles**" .
- ❑ All aspects of project delivery from start to finish are brought within an intense people management process focused on high performance and "breakthrough" outcomes.

4.2 Core alliance principles

It is essential that each alliance is built "from the ground up". A key part of this process is the development of the fundamental principles upon which the alliance is to be founded. While each alliance must develop its own set of principles the following core principles seem to be common to most alliances (although not necessarily expressed in these words):

- A primary emphasis on business outcomes whereby all parties either win or all parties lose.
- Collective responsibility for performance with an equitable sharing of risk and reward.
- A peer relationship where all participants have an equal say.
- All decisions must be "best-for-project".
- Clear responsibilities within a no-blame culture.
- Full access to the resources, skills and expertise of all parties.
- All transactions are fully open-book.
- Encouragement of innovative thinking with a commitment to achieve outstanding outcomes.
- Open and honest communication - no hidden agendas.
- Visible / unconditional support from top level of each participant.

The alliance principles become the philosophical foundation that underpin and drive all reasoning and behaviour for the project. In a well functioning alliance the participants will:

- respect each other
- support rather than blame each other; and
- go to extraordinary lengths to honour the commitments they have made.

It is worth noting that the word "trust" is sometimes absent from the alliance principles. The author's experience is that genuine trust tends to be an outcome of an alliance rather than a pre-requisite to entering into an alliance.

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[1] Some project alliances involve more than one owner

[2] "Wilful default" (sometimes referred to as "wilful misconduct") generally defined along the lines of an intentional act or omission by an Alliance Participant carried out with utter disregard for the harmful consequences for another Alliance Participant, but does not include any error of judgment, mistake, act or omission, whether negligent or not, made in good faith by an Alliance Participant.

4.3 "Pure" Project Alliances in Australia

Since the first projects in the oil and gas industry in the UK (refer Thomson[11]) project alliancing has spread to various industry sectors, including mining, on-shore process facilities, infrastructure and building. A list of some of the "pure" form project alliances with which the author has been involved or is well informed is included in **Appendix 1**.

4.4 Limb 1 – reimbursement of project costs

The guiding principles for reimbursement under limb 1 are straightforward:

(a) Each non-owner participant is reimbursed its actual costs incurred on the project, including costs associated with rework. *[The sharing of pain:gain under Limb 3 ensures that it shares equitably in the pain associated with wasted effort and rework.]*

(b) Reimbursement under limb 1 must not include any hidden contributions to corporate overhead or profit.

(c) All project transactions and costings are 100% open book and subject to audit.

It is usually left up to the alliance to establish procedures that ensure that reimbursement complies with the above guiding principles. In practice this is relatively straightforward for constructors but more complicated for designers. [Refer Ross[1] for detailed discussion.]

4.5 The BAU / Target Cost Estimate

Once the alliance is formed the Alliance Participants usually get to work immediately and intensively on strategic and detailed planning. One of the key tasks during this period is the development of the "Target Cost Estimate" (sometimes called the business-as-usual or BAU estimate). This is intended to be the best estimate of what the integrated team thinks it will cost (or would normally cost) to deliver the scope of work that is being undertaken by the alliance, using normal good practices. A typical Target Cost Estimate, for the simple case of one constructor and one designer, might be as summarised in the following spreadsheet (the "Sample Estimate"):

	A	B	C	D
1		**Element**	**Estimate $**	**Sub-total**
2	Constructor	Project salaried staff	4,000,000	
3		Wages labour	25,000,000	
4		Permanent materials	20,000,000	
5		Construction equipment	12,000,000	
6		Subcontract	19,000,000	
7		Site amenities & facilities	2,000,000	
8		Other project overheads	1,000,000	
9		Contingencies	2,000,000	85,000,000
10	**Designer**	Staff costs	4,300,000	
11		Expenses / disburse	500,000	
12		Contingencies	200,000	5,000,000
13	**Owner direct**	Salaried staff in team	1,000,000	
14		Owner supplier materials	8,000,000	
15		Other costs	700,000	
16		Contingencies	300,000	10,000,000
17				
18	**Initial Target Cost**			**100,000,000**
19				
20	Excluded from target			1,000,000

On some projects, particularly those involving the public sector, it is normal practice to engage an "Industry Expert" to undertake an independent estimate or at least do a "sanity check" on the Target Cost Estimate.

The development of the Target Cost Estimate is perhaps the first real test of a new alliance. It is important that the process by which the Target Cost Estimate is developed is consistent with the alliance principles. It is essential for the future health of the alliance that all parties feel relatively comfortable with the Target Cost and the process by which it was established. The author's experience is that although it can be a difficult process, invariably the parties do reach agreement and the process, if conducted properly, strengthens the relationships.

4.6 Limb 2 - Fee

It is normal practice for the non-owner participants to commit to an agreed Fee percentage at the time the alliance is formed, long before the Target Cost Estimate has been developed. The Fee should be seen as a "business-as-usual" return for providing the service. As an example let's say that the constructor's Fee percentage is 12% and the designer's Fee percentage is 30%. Once the Target Cost Estimate is agreed, these percentages are applied to the respective portions within the Target Cost Estimate to determine their respective fixed lump sum Fee ("Fee$"). Using the figures from the Sample Estimate as an example, the Fee$ would be:

- 12% x $85,000,000 = $10,200,000 for constructor
- 30% x $5,000,000 = $1,500,000 for the designer

In some cases the designer / constructor come to the alliance on the basis of a consolidated Fee%, having pre-agreed and declared how the Fee$ will be apportioned between them (eg. 85:15) regardless of their respective allocations within the Target Cost.

5 PAINSHARE:GAINSHARE ARRANGEMENTS[3]

5.1 Guiding principles

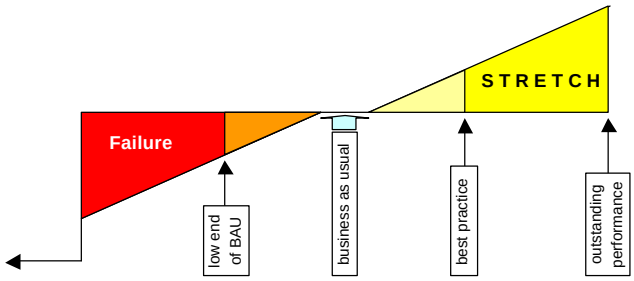
The limb 1 and 2 compensation structure is fairly standard across different project alliances. It is the painshare:gainshare arrangements under limb 3 that establish the commercial "personality" of each particular alliance. While the possible arrangements are limited only by the imagination, they should be designed to comply with the following fundamental principles:

1) Risk:reward should be linked to project outcomes which add to (or detract from) the value to the owner.

2) When tested against all possible outcomes the result for all Alliance Participants should be either win:win or lose:lose. Under no circumstances should the project outcomes lead to a win:lose outcome amongst the Alliance Participants – ie. everyone wins or everyone loses together.

[3] The June 1999 paper by Ross[1] contains a more detailed discussion on this topic with examples of some of the risk:reward mechanisms used on some alliances.

3) Performance better than BAU should lead to better-than-BAU returns while outcomes that fall short of BAU should result in less-than-BAU returns.



4) The mechanisms should be interlinked so as to discourage any tendency to sacrifice performance in one area in order to secure rewards in other areas.

5) The risk:reward mechanisms should be as simple as possible.

5.2 Owner's share of the pain:gain

As a general guide, unless there is good reason to do otherwise, the owner should assume 50% of the pain:gain with the remaining 50% to be distributed amongst the non-owner participants in accordance with pre-agreed ratios, as discussed in section 5.6 below.

50% owner ↔ 50% non-owner participants

5.3 Performance assessment

The sharing of pain:gain is generally based on measurable outcomes in key performance areas – typically covering some or all of the following areas:

CAPEX	Cost	Underrun:overrun – this is usually the primary risk:reward mechanism.	
	Time	Interim milestones / completion date Commissioning ramp up	
	Other	Safety Quality Environ Community	Cultural heritage Stakeholder relations Interface management Traffic control
OPEX	Operating costs Production / outputs		Plant availability Plant efficiency

In general performance assessment should be on the basis of objectively measurable criteria. However in certain areas it is not practical or appropriate to base the assessment purely on outcomes. For instance in areas such as safety, environment, community, etc. it is normally better to base the assessment on a combination of process-based "lead" indicators and outcome-based "lag" indicators, using some or all of the following methods:

- Compliance audits of systems/processes
- Outcome statistics
- Formal survey of stakeholders
- Subjective rating from within alliance

On large very complex projects with a diverse range of stakeholders, such as the Northside Storage Tunnel Project, it may be desirable to develop sophisticated measurement systems for all of these areas - refer Henderson and Cuttler[16]. On smaller less complex projects the same drivers can be achieved with much simpler mechanisms.

5.4 Capping of the potential downside risk

The total amount that the non-owner participants put at risk under Limb 3 is usually capped at the Fee$ - ie. the worst outcome for a non-owner participants is that it recovers its costs under Limb 1 but its share of the "pain" under Limb 3 completely negates the Fee it receives under Limb 2[4]. A valid question often asked is:

"Why should there be any limit on the downside risk - if it is to be a true full-bodied alliance then why shouldn't the non-owner participants assume a share of the risk hand-in-hand with the owner all the way?".

In answer to this question, the author considers it is appropriate to have a risk cap for the following reasons:

1) Ultimately the project is owned by the owner and it is the owner that will eventually receive the benefits of the success of the project through its operational life. To expect a contractor, who has no equity in that downstream success, to assume an unlimited risk in exchange for an inherently limited potential reward is neither reasonable nor logical.

2) In a properly balanced and well managed alliance the risk of exhausting the risk limit should be very low and it may not be in the owner's interest to insist on open-ended risk. Where the downside risk is capped a contractor can offer a Fee% that is consistent with the defined limits of its risk. By not having a risk cap there is a risk that the owner will end up paying a higher Fee% for little or no practical return.

5.5 Capping the potential upside reward

As a general guide no express cap should be placed on the non-owner participants' upside reward potential because:

- The amount by which you can better any target is inherently capped in any case – ie. you obviously cannot underrun a Target Cost by 100%.
- There should always be some tangible commercial incentive for the non-owner participants to strive for even better win:win outcomes.

Some owners may feel they are getting added protection (in addition to the use of an Industry Expert as discussed in section 4.5 above) against the risk of an "inflated" Target Cost. However the author recommends against this practice as it sets the wrong tone for the alliance.

[4] In some alliances no distinction is made between what the author refers to as "limb 2" and "limb 3". In those alliances the combined (limb 2 + limb 3) are collectively characterised as a Fee which can fluctuate (as low as zero) depending on performance outcomes. The net effect is the same – just different terminology.

5.6 Sharing ratios amongst non-owner participants

The non-owner participants must agree in advance how their share of risk:reward (usually 50% as noted above) is to be distributed amongst themselves – either the actual sharing ratios or a pre-agreed formula by which they will be determined. The author's preferred method is for risk:reward to be distributed in proportion to their respective Fee$'s. Using this method for the Sample Estimate the remaining 50% would be distributed 87.2% to the constructor and 12.8% to the designer - as illustrated below:

	A	C	D	
1		Estimate $	Sub-total	
2	Constructor	4,000,000		
3		25,000,000		
4		20,000,000		
5		12,000,000		
6		19,000,000		$10.2m / $11.7m = 87.2%
7		2,000,000		
8		1,000,000		
9		2,000,000	85,000,000	x 12% Fee% = $ 10,200,000
10	Design	4,300,000		
11		500,000		
12		200,000	5,000,000	x 30% Fee% = $ 1,500,000
13	Owner	1,000,000		
14		8,000,000		Total Fee$ $ 11,700,000
15		700,000		
16		300,000	10,000,000	
17				$1.5m / $11.7m = 12.8%
18	Initial Target Cost		100,000,000	

In some alliances the distribution is based on their respective portions in the make-up of the Target Cost. Alternatively the non-owner participants sometimes agree up front (before the Target Cost is developed) to share pain:gain along pre-determined lines (eg. 85%:15%) regardless of their respective Fee$'s or portions in the make-up of the Target Cost.

Regardless of which method is used, once agreed the sharing ratios should remain fixed regardless of the relative performances of the participants – ie. even if one non-owner participant performs very well within the alliance and the other performs poorly, the sharing of pain:gain remains at the predetermined sharing rates. This approach underpins the fundamental alliance principles of collective responsibility and no blame and the concept that "*we all win or we all lose together*".

6 Managing "Change" / Variations

6.1 General

The management of scope changes under an alliance is very different to the administration of Variations under a traditional form contract like AS2124-1992[14]. In an alliance all the Alliance Participants should be involved in the development of the Target Cost Estimate and have the opportunity to allow for inherent uncertainties consistent with the state of knowledge at the time.

Under a conventional contract the Contract Sum is usually only the starting point. With the impact of variations and claims the eventual cost (the "outturn cost"), especially on complex projects, is often substantially higher than the tendered cost.

In a project alliance the Target Cost is a best estimate of the outturn cost, with due allowance already included for all the kinds of things that would normally be the subject of a variation (or an extension of time) under a conventional contract. The Alliance Participants collectively assume all sorts of risks that are normally retained by the owner under a traditional "risk transfer" form of contract – such as:

a) The costs associated with latent conditions, design evolution changes, mistakes by the owner, late delivery of owner-supplied materials, etc.

b) The time delay associated with the above items and inclement weather and other neutral delay events.

In other words the Alliance Participants, through the Target Cost Estimate, assume collective ownership of all these risks. Of course the flipside of this is that the Alliance Participants must come to an agreement on what allowances should be made within the Target Cost for uncertainties and unknowns. The owner cannot expect the non-owner participants to take on a share of these risks unless there is reasonable provision in the Target Cost to cover them.

6.2 Limited scope of variations

It is usually left up to the Project Alliance Board to decide if events do or do not constitute an Alliance variation. As a general rule, unless agreed otherwise, the only things that should give rise to an Alliance Variation are:

- a significant increase or decrease in the scope of work that has to be undertaken by the alliance. *[eg. add in a building that was never part of the alliance scope.]*
- a substantial change in the fundamental parameters underlying the design basis. *[eg. increase the required handling capacity of the plant from 500m^3/hour to 750m^3/hour.]*

However changes required as part of normal design development would not be a Variation. Accordingly the tendency is to have very few or no Variations at all on alliance projects. It is important that the Alliance Participants are aligned right from the start on their expectations of what is and what is not an Alliance Variation. The author has found that the most effective way of doing this is by means of a short "variation alignment" workshop held before the Target Cost is developed.

6.3 Implication of an Alliance Variation

It is important to remember that a Variation under an alliance does not have the same commercial implications as a variation in a conventional contract because the actual cost of doing all project work is reimbursable anyway (under limb 1) regardless of whether or not the work is deemed to be an Alliance Variation. The question of whether something constitutes an Alliance Variation is only relevant for the purposes of limbs 2 and 3. If a particular situation is declared to constitute an Alliance Variation then the Fee$ and the Target Cost are both adjusted accordingly.

7 Managing Time under a Project Alliance

7.1 General

The administration of extension of time provisions tends to use up a lot of energy under conventional forms of contract. In the author's experience it is difficult for both the contractor and the owner (or the superintendent) to make rational decisions on time-related issues under conventional form contracts.

Under a project alliance the Alliance Participants are able to manage time-related issues in a sensible manner that is truly best-for-project.

7.2 Target Dates

The target schedule for the project will include the agreed Target Completion Date and any interim milestones and commission dates as appropriate. This must be developed and agreed in conjunction with the Target Cost Estimate.

Just as the Target Cost is focused on the outturn cost on the understanding that Alliance Variations will be limited to the two conditions noted in section 6.2 above, the target schedule must include due allowance for known and unknown risks on the premise that there will be no basis for adjusting target dates other than an Alliance Variation.

If delays occur then it is up to the Project Alliance Board to decide whether to adjust the target dates or to incur additional costs to recover the lost time. If the delays stem from an Alliance Variation then those extra costs would be taken into account in the $ adjustment for the Alliance Variation.

8 Selection Process

8.1 Overview

Without any doubt, the most important step for the owner along the path to a successful alliance outcome is to choose the right participants (s) in the first instance.

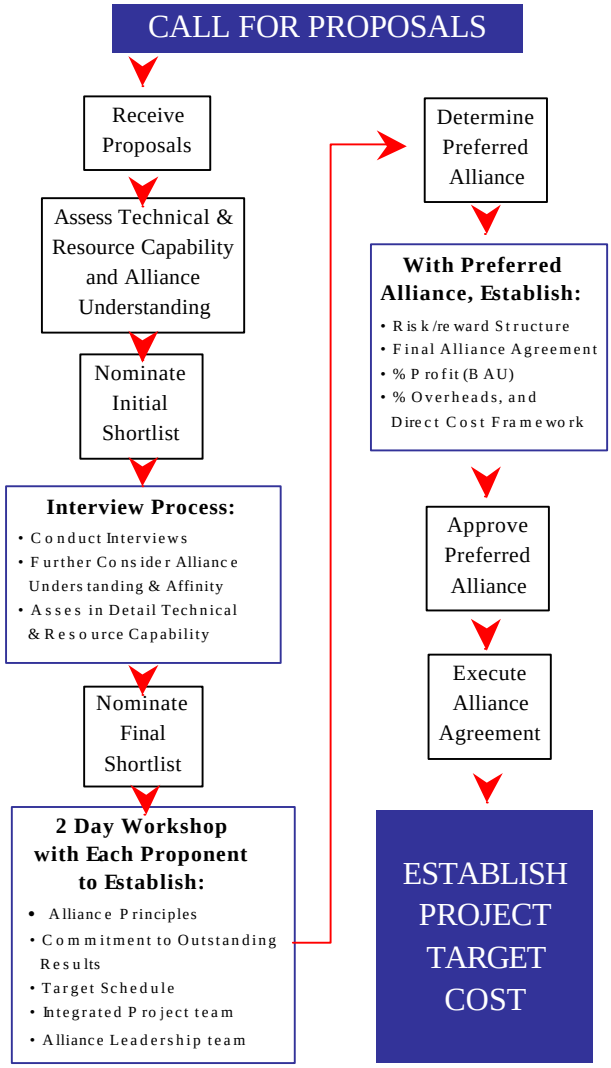
While the Alliance Agreement normally provides a way out for the owner at any time it would cause a serious setback to the project if the owner had to seek alternative participants. So the selection process must be so robust that it is almost impossible for the "wrong" participant(s) to survive the process.

Based on experience with various alternative selection processes, for medium to large alliances the author now strongly favours the model, understood to have been developed by JMJ Associates, as used on several major public sector alliances in Australia including some of those listed in **Appendix 1** – specifically:

- Northside Storage Tunnel Project
- National Museum - Acton Point ACT
- Woodman Point WTP Amplification
- Awoonga Dam Raising Project Alliance.

The philosophy behind this particular selection process is detailed in a paper by Hutchinson and Knisely[15].

The following diagram (based on the Awoonga Dam Request for Proposals document) illustrates the process:



Some of the notable features of the process include:

a) The Alliance Agreement is executed before the participants even start to develop the Target Cost.

b) Basic commercial parameters such as Fee% and risk:reward structure are not discussed until after the preferred proponent has been selected. This ensures that selection remains focused on the core selection criteria (see section 8.2 below) and is not inappropriately sidetracked by commercial issues.

c) Having conducted a ½day interview with the initial shortlist (of 4 to 6 proponents) the owner's core team members participate in a full 2-day workshop with at least two proponents.

d) The intention is that the proponent is represented at the interview and workshops by the core team members that will deliver the project, along with appropriate corporate sponsors.

The overall aim of the process is for the owner to get a very good feel for what it will be like to work with the final listed proponents and establish which team has the most potential to deliver truly outstanding results in an alliance with the owner.

The process can be "condensed" on small projects, to keep the cost consistent with the smaller scale of the project, without unduly compromising the integrity of the process.

For major projects the author recommends that the chief executives of the various participants meet during the early stages of the alliance for a brief eye-to-eye meeting and handshake. This gives them the opportunity to establish a personal relationship and to give their personal commitment to a best-for-project approach. The author's experience across dozens of relationship-based contracts in Australia is that once a promise, properly understood, is given at this level CEOs will go to extraordinary lengths to make sure that their promises are not dishonoured.

8.2 Selection criteria

The selection process can be adjusted to suit the particular circumstances for each project. The important thing is to ensure that proponents are rigorously assessed against appropriate criteria, including:

1) Demonstrated technical, financial and management capacity to handle the scope of work.
2) Understanding of and commitment to the alliance way of doing business.
3) Track record and demonstrated capacity to deliver outstanding outcomes in safety, quality, environment, community relations, etc.
4) Preliminary ideas on innovations and execution strategies and the potential to deliver outstanding design and construction outcomes.
5) Willingness to commit to the project objectives and demanding "stretch" goals.
6) Track record / demonstrated ability of proponent companies to work with each other.
7) The quality of the key personnel and their affinity for working together as a high-performance team.

Discussion of commercial parameters and the finer points of the Alliance Agreement are best left until the preferred proponent has been selected. It is relatively easy in open discussions to arrive at acceptable Fee%'s in line with industry norms and to lock in on the other risk:reward parameters. The author is not aware of any alliance where negotiations broke down during negotiations of these commercial issues.

8.3 Probity of the selection process

It is essential for public sector projects that the selection process satisfies the three main pillars of probity:

- Equity.
- Transparency.
- Accountability.

To achieve this the owner should engage a suitably qualified probity officer to ensure that the selection process is designed to meet the necessary requirements. The probity officer should then be retained throughout the selection process to ensure that the actual process complies with the requirements of probity.

9 LEGAL / CONTRACTUAL FRAMEWORK[5]

9.1 General

It is beyond the scope of this paper to address the legal framework or legal issues in detail. The purpose of this section is to give an overview of contractual structures and identify some key issues to consider for each alliance.

9.2 Is there a role for lawyers? – Yes!

Lawyers have an important role to play up-front in ensuring that the intention of the parties is enshrined in a properly structured and legally effective Alliance Agreement. There are a number of important legal issues, some of which are mentioned below, that must be properly understood and managed under an Alliance Agreement.

There are greatly differing views amongst lawyers about project alliancing, from those who support it wholeheartedly in its purest form (eg. Thomson[11]) to those who say it is a dangerous concept that cannot be supported legally. In the author's experience specialist construction lawyers tend to be very supportive of the concept and add significant value to the process once they are fully briefed on the process and aligned with the intention of the participants. With this in mind it is recommended that:

- At least one lawyer with previous alliance experience who understands and is committed to the alliance concept should be involved in the early stages of alliance development.
- All participants should contribute to the development of the Alliance Agreement. This usually means that lawyers from one or more of the participants will need to (or want to) review the Alliance Agreement. If they have a good understanding of the principles and practices of project alliancing their input usually adds significant value to the process. Ideally they should first participate in an early workshop where the alliance concept is discussed and the participants develop the foundations of their relationship.

Once the alliance is fully established and the Alliance Agreement executed there should not be any on-going role for lawyers in respect of issues between the Alliance Participants themselves. However the alliance as a whole may have a need for specialist legal support from time to time when dealing with outside parties.

9.3 Typical features

Standard form design and/or construction contracts such as AS2124[15], AS4300[16] or AS4300[17] are not suitable as a starting point for drafting an Alliance Agreement. In these standard form contracts specific risks are allocated to the party that is perceived to be in the best position to manage those risks. Under an Alliance Agreement the participants collectively share all risks with each participant assuming a prescribed share in accordance with pre-agreed ratios (refer sections 5.2 and 5.6 above).

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5 The author is not a qualified legal practitioner. Comments on legal issues in this paper should not be relied upon without advice from a qualified legal practitioner.

This distinction alone requires a fundamentally different approach to drafting. Some of the more notable features of typical Alliance Agreements that set them apart from standard form contracts include:

1) **Performance obligations** are generally stated to be **collective** ("*the Alliance Participants shall….*") rather than individual ("*the Contractor / Designer shall…..*"). However certain obligations still need to be individual (eg. *the Owner will pay the Other Alliance Participants….*").

2) Consistent with the notion of collective responsibility, decision making is a collective function. Thus all **decisions** of the Project Alliance Board must be **unanimous**. [In the author's opinion this is a prerequisite for a high-performance alliance. Anything less (eg. a casting vote for the owner) can potentially undermine the very foundation of the alliance.]

3) Liability as between the participants is limited to the pain-sharing arrangements set out in the compensation model. This is typically reflected in the Alliance Agreement with a provision along the following lines:

   " A failure by any Alliance Participant to perform any obligation or to discharge any duty under or arising out of this Agreement will not give rise to any enforceable obligation at law or in equity whatsoever save and except to the extent that the failure also constitutes Wilful Default."

   where "Wilful Default", also referred to as "Wilful Misconduct" in some alliances, amounts to a total abrogation of duty – typically defined along the following lines:

   " An intentional act or omission by an Alliance Participant carried out with utter disregard for the harmful consequences for another Alliance Participant, but does not include any error of judgment, mistake, act or omission, whether negligent or not, made in good faith by an Alliance Participant."

4) Consistent with all this there is an express commitment that, apart from Wilful Default, there cannot be any recourse to arbitration or litigation.

5) There are very limited or no provisions dealing with "extensions of time" – refer section 7 above.

6) The payment regime aims to achieve as close as possible to cash neutrality with no requirement for formal security of any sort.

7) The owner retains the right to terminate for convenience. In such an event the non-owner participants are reimbursed all limb 1 costs and usually an equitable portion of limbs 2 and 3. However the owner is usually not liable for any cost, loss, expense or damage beyond this (including loss of margin associated with that part of the work not carried out).

8) The books of each participant, including the owner, are open to audit to the extent that they have any bearing on compensation under the alliance. Typically an independent audit expert is appointed as the Alliance Auditor, although sometimes the participants accept someone from within the owner's group as auditor.

9.4 Structure & timing of Alliance Agreement

While some early alliances were based on an "umbrella" alliance agreement signed by all the participants with a series of separate "works contracts" between the owner and each of the non-owner participants, the current practice is to have a single Alliance Agreement executed by all the participants that sets out the rights and obligations of all participants both collectively and as to each other. The Alliance Agreement would supersede any pre-existing joint venture or teaming agreement between the non-owner participants. In this way all the participants in the alliance are fully aware of the rights, obligations and expectations of all the other participants without any risk or suspicion of hidden or conflicting agendas.

Alliance Agreements are typically much shorter than more traditional forms. In the context of collective performance obligations and unanimous decision-making the tendency is to adopt a "minimalist" non-prescriptive approach where many of the issues that would normally be spelled out in detail are left up to the alliance to administer and resolve.

With respect to timing the author has been involved with two distinct approaches, which although at first they appear to be very different, deliver the same effect:

1) The Alliance Agreement is executed once the basic commercial arrangements are in place but before work starts on development of the Target Cost Estimate. Using this approach the Alliance Agreement provides a means whereby the participants "walk away" if they are unable to agree on the Target Cost or other relevant parameters associated with the Target Cost.

2) Once the basic commercial arrangements are in place the Alliance Participants enter into an Interim Project Alliance Agreement ("IPAA") whereby the non-owner participants are reimbursed their "limb 1" costs for all work during the development of the Target Cost Estimate. Once the Target Cost and associated parameters are all agreed then they enter into the full Alliance Agreement.

In the overall scheme of things both approaches deliver much the same outcome with some advantages and disadvantages associated with each – specifically:

- The advantage of the former approach is that it tends to be a simpler form document that can be executed in the earliest stages, providing an important symbol for the launch of the alliance. The disadvantage is that some important provisions (eg. insurances) have to be left open to be worked out later by the alliance.

- The latter approach results in a more detailed and prescriptive document which reflects the work already carried out by the alliance at the time of execution – eg. Target Cost, Fee$'s, Target Dates, etc. are all known. It also allows work on the alliance to commence on the basis of a relatively small IPAA budget while approval is being sought for the whole capital budget for the project – this may suit owner organisations that have trouble getting full project approval before the Target Cost is known.

9.5 Insurance issues

Under a project alliance each participant is assuming a share of certain risks that it would never have to bear in a conventional contract. One of the main strategies for managing these risks is of course insurances. Typically participants come to a project alliance with certain insurances already in place at a corporate level. It can be quite a complex task for the alliance to tap into the benefits of these pre-existing insurances and provide an appropriate continuum of insurance that covers employee, equipment, contract works, public liability and professional negligence.

In the author's view the insurance industry is not very flexible when it comes to amending pre-existing policies to suit the needs of a project alliance. Professional Indemnity (PI) insurance is particularly problematic:

- It is necessary to make a legal claim against a design consultant to trigger a conventional PI insurance policy. If an alliance suffers loss as a result of professional negligence by one of the Alliance Participants the Alliance Agreement prevents any legal claim between the participants and a conventionally worded PI policy will not respond.
- One of the key benefits of a project alliance is the ability to involve constructors, owners and suppliers in the design and planning process and to gain the intimate involvement of designers throughout the construction / commissioning stages. Conventional PI policies would need to be extended to name all the Alliance Participants as insured under the policy.
- Typically alliances have to take out a project-specific PI insurance policy including appropriate "run-off" cover (typically 5 years or more) even though the designer participant maintains its normal corporate PI policies throughout the whole period.

Although no expert in insurance matters the author cannot see how the risk profile for insurers is significantly increased under a project alliance. If project alliancing continues to gain acceptance as a delivery method the insurance industry will surely have to take a more flexible approach to eliminate such wasteful duplication of cover.

9.6 Other legal considerations

Each of the participants needs to properly understand the commercial and legal context of what they are committing to. This section gives an overview of some of the issues that may need to be considered without discussing any in great detail:

1) The Alliance agreement may need to be customised to meet the needs of individual legal jurisdictions. For example in Queensland:
   - One participant must be appointed as "principal contractor" under section 13 of the Workplace Health and Safety Act (1995).
   - The Queensland Building Services Authority Act (1991) imposes certain provisions into any contracts that include "building work".
2) The "no litigation" provisions (see section 9.3, item 4 above) might be argued to be an ousting of the jurisdiction of the courts and some may say therefore that the concept has no proper legal foundation. In this respect:
   - If properly drafted enforceable rights will exist where there is a Wilful Default (or bankruptcy etc.) and in those cases there is a right of action. In all other cases there is no right of action to pursue.
   - In the author's experience the finer legal point here is not relevant because if the intent is clear and the alliance is properly established and maintained it will never become an issue. The intention is that the integrity of the participants within a high-quality relationship in conjunction with the commercial drivers will force the participants to reach agreement in all events. As evidence of this in practice, the author is not aware of any alliance where the participants have failed to reach unanimous agreement!
3) Those participants who normally only have an arms-length involvement in site work (eg. owners, designers and suppliers) may, as a result of their active participation in the Project Alliance Board and the Integrated Project team, have an increased exposure to prosecution under relevant legislation such as safety and environment. [Of course with involvement comes control and the protection that they assume they have as arms-length players under a conventional contract may be illusory in any case.]
4) There may be some concern that the Alliance Agreement gives rise to fiduciary obligations amongst the participants. Regardless of the finer legal points it seems to the author that a typical Alliance Agreement expressly imposes duties that would be imposed at common law in any case and that the participants fully understand and intend those obligations to exist.]
5) The default provisions (where a participant has to be terminated for Wilful Default) need to be considered carefully, especially where there are more than two parties to the Agreement.
6) The participants must decide how long the books will remain open for audit after the project is completed. The author's preference is to close the books with a thorough final audit as soon as possible after final completion. However some owners, especially those in the public sector, may need to retain a right of audit long after project completion.
7) The provisions of the "A New Tax System (Goods and Services) Act 1999" must be thought out and incorporated carefully into the compensation and payment arrangements.

10 Human / Organisational Issues

10.1 General

A project alliance is not based on altruism or blind trust – first and foremost it is a business relationship designed to deliver optimum commercial benefits to all parties involved. However, more than anything else successful alliancing is about people and successful relationships. While it is very important to get the various commercial and legal structures "right", no matter how well they are set up a project alliance will not deliver outstanding outcomes unless there is an outstanding team of people working within a high-performance culture. [Note that this does not necessarily require a team of outstanding people.]

In a project alliance the relationship "is everything" and cannot be taken for granted. Even where the parties have established a close business relationship on previous projects (and this is highly desirable), it is still important to build the relationship "from the ground up" on each specific project.

10.2 Alliance management programs

In the author's view the single biggest risk facing any project alliance, assuming the right partners have been chosen, is that the relationship between some of the participants may unravel. A well designed alliance management program can eliminate this risk. A typical alliance management program would seek to:

- Establish a foundation charter for the alliance incorporating the vision objectives and "alliance principles" that will form the philosophical basis for reasoning and behaviour throughout the project.
- Align and commit all project personnel to the alliance charter.
- Create a culture of innovation and "breakthrough" thinking where team members continually seek to "raise the bar" and pursue seemingly "impossible" targets with an expectation and a passion to succeed.
- Develop and enhance leadership skills and practices at all levels of the project team.
- Monitor and continuously improve the quality of relationships at all levels within the project team.

While it is beyond the scope of this paper to deal with alliance management processes in any detail, typically the alliance management will cover a whole range of different facets of project delivery within a framework that is focused on people and the way they relate to each other:

- Well established workshop processes, such as value management, value engineering, constructability and risk management can be taken to new levels of effectiveness in the context of a project alliance.
- Near seamless collaboration and communication across the interfaces between project teams is possible.
- Alliance champions, implementation teams, opportunity and breakthrough workshops can be used to turn the passion and commitment into results.

The processes should not be restricted to workshops attended by engineers and managers. The alliance culture should be interwoven with normal field processes such as site inductions, toolbox meetings, work activity briefings, etc. so that all personnel are enrolled into the spirit of the alliance, feel part of the process and have the opportunity to participate in a tangible way.

10.3 Alliance facilitators

Although a significant cost, it is normal practice on successful alliances to engage a skilled facilitator to design and lead the alliance management program. Even on smaller projects an alliance facilitator should be used to establish the program and provide arms-length guidance to in-house resources on program implementation.

There is no reason why companies should not develop high-level alliance facilitation skills in-house as project alliancing becomes more widespread, although there will probably always be a need for some external facilitation. In the meantime there are several skilled alliance facilitators around Australia who have a demonstrated track record in the establishment and implementation of successful alliance management programs.

10.4 Project organisation / culture

In more traditional delivery methods contractual relationships impose well defined and well proven responsibilities and lines of communication. In the absence of these traditional contractual roles and in the enthusiasm for a "non blame" integrated team culture there is a risk that accountabilities and responsibilities can become blurred in a project alliance. With appropriate focus during development of the alliance, usually at one of the early workshops, this risk can be eliminated. Again it is beyond the scope of this paper to examine organisational structures in detail. However a few points should be noted:

- In general there is always a **Project Alliance Board** (although it may be called a different name) that governs the alliance, setting policy and the overall direction by unanimous agreement. The Board typically comprises one or more senior representatives from each participant who are at least one step removed from the day-to-day execution of the project.
- Organisation of the integrated project team varies widely depending on the circumstances. On some projects best-for-project personnel are assigned to key engineering and management roles so that all the participants are well represented in the project leadership team. On other projects the bulk of the leadership team might come from the constructor with just a few key roles filled by owner or designer personnel. Regardless of the mix of representation the organisation and culture must be such that no one within the team sees themselves as "representing" their individual employer. Rather all personnel should see themselves as part of a "**virtual organisation**" where the interests of their own employer are best served by advancing the interests of the project.

10.5 Team location / communication / website

Ideally the whole alliance team should operate from a project-specific alliance office. This makes it much easier to develop the "virtual company" spirit and develop seamless communication between all members of the team. However it is not always practical to consolidate the team into one location and in such cases one of the greatest challenges for the alliance is to establish communication systems that establish a cohesive project culture despite the physical separation of different members of the team. The use of a secure website as a communications and information portal can greatly enhance the management of information on an alliance. This can range from:

- document management with file sharing and storage;
- to more sophisticated systems that allow real-time access and shared management of design, construction, program, costing, statistics, procedures, etc. where different access levels can be assigned to different users depending on their needs. This might include limited access for external stakeholders to project information or relevance to their interest.

It is important for the core alliance management team, having taken up the alliance challenge, to use its leadership skills to infuse project personnel at all levels with the same vision and enthusiasm.

10.6 Staff gainsharing schemes

It may be appropriate to implement a staff gainsharing scheme. However, staff gainsharing schemes can easily backfire if not managed carefully. They need to be developed within a coherent set of guiding principles to suit the particular circumstances of the project. In the author's experience there are generally inadequate management processes in place to identify and deal with the complex issues associated with the development and implementation of worker gainsharing schemes. The result is that these schemes often fail to deliver the value that they should. The alliance must either manage the process properly or not embark on it at all.

10.7 Management of subcontracts

It is up to the alliance to develop and implement appropriate subcontracting strategies based on the best-for-project principle. A detailed discussion of this topic is outside the scope of this paper. In general terms a subcontractor might be engaged under any of the following arrangements:

a) A "sub-alliance" arrangement intimately linked to the main alliance.

b) Some form of open-book incentive based contract linked to key performance indicators (KPIs) that mirror or support the KPIs in the main alliance.

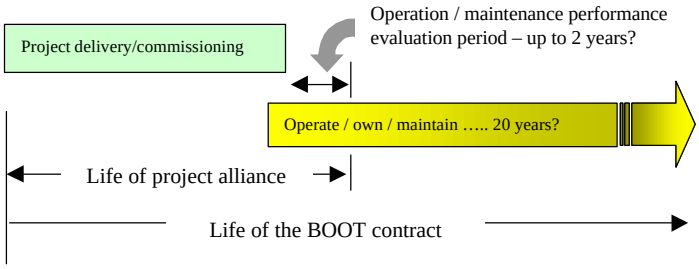
c) A more traditional schedule of rates or lump sum type arrangement.

Regardless of the method of engagement it is important to ensure that the alliance culture transcends subcontract interfaces and permeates all personnel working on the project.

10.8 Project v. on-going responsibilities

The aim of a project alliance is to deliver the project. This clear function should not be clouded by any on-going long-term ownership, operations or maintenance responsibilities attaching to some of the participants. The inclusion of on-going responsibilities provides a more robust alignment of commercial interests and should enhance the effectiveness of the project alliance – but should not alter the fundamental purpose of the project alliance. The "sun should set" on the project alliance within a reasonable time.

Typically, where some KPIs are based on operational performance some period will be needed beyond commissioning to measure the performance of the project in operation. The period of time will depend upon the nature of the project but generally does not exceed 2 years.



11 Understanding & Capturing the Success

11.1 General

This section looks briefly at some of the main benefits of project alliancing and seeks to explain in broad terms what it takes to ensure that a project alliance delivers the kind of outstanding outcomes that have been achieved on some.

11.2 Best value for owner?

It goes without saying that an owner should only adopt an alliance approach, as opposed to some alternative delivery model, if it is satisfied that the alliance model will deliver the best overall value for the owner's investment.

It may be difficult and perhaps inappropriate to "sell" project alliancing as a delivery method solely on the basis of capital cost reductions because it is difficult to conclusively demonstrate that the outcome will deliver cost reductions compared to a more conventional delivery method. More likely it is the assurance of:

- timely completion;
- quick, cooperative and effective response to unpredictable events;
- emphasis on life-cycle rather than project-cycle;
- more effective management of risks and opportunities;
- better management of all the stakeholders; and
- acquiring skills and having fun along the way,

combined with the likelihood of lower direct costs and the potential for some real breakthroughs that should persuade an owner to adopt the alliance approach.

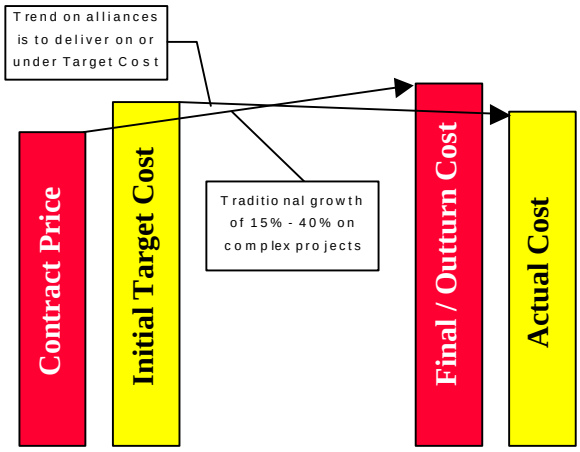
11.3 Tender vs. outturn cost

Under a traditional model the owner gauges the relative "value" of competing contractors by inviting tenders either on the open market or from a select group of preferred tenderers. In a mature open market economy like Australia, strong competition amongst contractors ensures that tendered prices are not artificially inflated. However, under an alliance the "price" is negotiated and the owner has no definitive way of testing the negotiated price against the open market. So the owner might pose the following important questions:

1) How can I be sure that the alliance model will deliver me better value than a traditional approach?
2) How do I know that the Target Cost is not artificially inflated above prevailing market prices?

Unfortunately there are no simple or short answers – the owner must make a judgement based on an informed assessment of the many complex issues involved. However there are some points that the owner should take into account – specifically:

1) Using conventional contract forms the tender price is only the starting point. The contract provides express mechanisms by which the contract sum is adjusted (invariably upwards) to take account of variations, delays, latent conditions, etc. Contractors may also seek additional costs on other grounds (eg. damages for breach, or under statute or common law). The result is that the final contract price ("outturn" cost) can be substantially higher than the tender price. On particularly complex projects the growth can typically be in the order of 15% to over 40%. In contrast the Target Cost is a true estimate of the outturn cost.
2) Few would argue that a group of aligned and dedicated people working in a high performance team where there are no contractual obstacles to full co-operation will deliver a project at a lower overall cost than an equivalent team operating in an adversarial environment under a traditional form of delivery. While this does not necessarily mean it will cost less for the owner (as the contractor might "subsidise" a significant portion of the cost as a result of underbid or other reasons) it is not unreasonable to speculate that the owner will end up paying the lion's share of costs expended on any project, in one way or another.



11.4 Main benefits to the owner

From the owner's perspective, the main benefits that can be realised by adopting the alliance approach (in the right circumstances) are:

1) Real prospect of achieving outstanding "**breakthrough" outcomes** generally with much better management of potential opportunities.
2) Much greater likelihood of on-time or **early completion** as a result of:
   - Better / flexible management of scope changes
   - Focus on solutions, not on positions
   - Aligned behaviours in the face of adversity
   - Increased levels of innovation
   - Collective and aligned strategies to manage inherent risks and external threats
3) Optimum life-cycle cost / performance
4) Potential for **lower capital costs** as a result of:
   - Constructability input at early design stage
   - Improved / innovative execution strategies
   - Elimination of needless duplication of people, systems and facilities
   - No time / cost expended on protecting positions
   - 50% sharing of cost savings
   - Aligned behaviours in the face of adversity
   - Collective and aligned strategies to manage inherent risks and external threats
5) Significant **increase in owner's skills** in the understanding and hands-on management of construction resources
6) **Increased job satisfaction** for owner's staff leading to overall improvement in organisational culture.

11.5 Benefits specific to the non-owner participants

Most of the features listed above obviously deliver tangible benefits to all the participants in a project alliance. From the perspective of a non-owner participant the alliance approach brings specific benefits:

1) Potential for very good returns within acceptable limits of risk. [It is misleading to say "lower" risk. While the overall risk is capped, within that limit the non-owner participants lay-off some of the risks they would normally own completely but take on a share of risks they would normally never have to assume.]
2) Enhancement of reputation leading to increased prospects of repeat and referred work.
3) Strengthening of relationship with owner and the other participants – forming the basis for possible future strategic alliances.
4) Increased job satisfaction for staff leading with benefits to overall organisational culture.
5) Significant increase in communication and general project management skills.

11.6 The real cause of success

The most notable feature of project alliances is the manner in which the project team achieves consistently high performance in a culture that is typically characterised by:

- extraordinarily high levels of enthusiasm, even amongst groups that are generally perceived to be less-than-dynamic;
- achievement of "breakthrough" outstanding outcomes for all participants as well as external stakeholders;
- close personal relationships that tend to endure beyond the project; and
- very high levels of job satisfaction for all involved.

In the author's view, viewed in general terms the reason this occurs so effectively in project alliances is because of two primary factors:

- The underlying commercial arrangements are set up in such a way that the commercial interests of the participants are fully aligned. Risks are not allocated to the party most able to manage that risk – rather all risks (and opportunities) are shared collectively by the alliance. This creates a virtual organisation where the commercial interests of the Alliance Participants are aligned with those of the "organisation" and the prevailing and logical attitude is one of "all-for-one and one-for-all". This aligned commercial framework is an essential foundation for a high-performance alliance. However this factor alone is not sufficient to deliver the kinds of outstanding outcomes that have been demonstrated on successful project alliances.
- What really delivers the "breakthrough" performance is the intensive focus on "people" issues based on a belief that people produce results, with accompanying leadership, processes and systems to manage people and the results they achieve.

These two factors go hand-in-hand – in order to achieve truly outstanding outcomes you cannot have one without the other. While it is possible to get excellent collaboration between the parties where commercial interests are not aligned (as has been demonstrated in many partnering projects) it is not realistic to expect the truly outstanding results that have been achieved by successful project alliances.

11.7 Strategies to ensure success

The author is not aware of any "pure" project alliance that has "failed". Even the HBI alliance (refer Appendix 1) is acknowledged by BHP personnel involved in the alliance to have been successful in the context of what was obviously a failed project overall.

However as noted in section 1.2 above there are early warning signs that alliancing may be (unfairly) discredited as more and more owners, expecting the kind of "breakthrough" outcomes that have been achieved on some pure alliances, adopt lesser forms of "alliance" models that lack some of the features that are essential for achieving the outstanding outcomes they are hoping for.

Although there may never be a way to definitively compare the relative merit of various delivery models, the author believes that the alliance model is almost certain to deliver the best value outcome for the owner, provided

a) the owner, having acquired a good understanding of the principles underlying project alliancing, uses the alliance approach on projects where the conditions call for it to be used; and

b) having elected to use the alliance approach, the owner ensures that the following keys steps are taken:

- **Make sure the alliance model has all the mandatory features of a "pure" alliance**

  See the list of essential features in section 4.1 above. In many cases it may be better not to embark on an alliance at all than to implement a lesser form that lacks some of the features (eg. unanimous decision-making) that are essential for the alliance process to work as it should.

  Where there are good reasons for the owner to adopt a lesser form of alliance then it is important that all parties understand how behaviour drivers might be altered and have appropriate strategies in place to manage the relationship under those circumstances.

- **Select the "right" partners using appropriate criteria**

  Use a robust selection process along the lines described in section 8.2 above. On larger projects arrange for the CEOs, in an eye-to-eye exchange, to give their personal commitments that they will do their utmost to ensure that the alliance principles will be upheld.

- **Put in place a comprehensive alliance management program to manage people, their relationships and the results they achieve.**

- **Ensure that all key stakeholders (including those outside of the alliance) are enrolled into and committed to the achievement of the alliance objectives.**

11.8 Facts and Myths

Appendix 2 examines some common views on project alliancing and seeks to separate the facts from the myths.

Note that this is not intended to be a complete list of "pure" project alliances carried out or underway in Australia. Although to the best of the author's knowledge the information is correct, all information should be checked with the relevant participant(s) before being relied on.

Year(s)	Project Alliance / Owner	Non-owner Participants	Comments / source
'94 - '96	**Wandoo B oil platform** WA ~ $377m Ampolex (Mobil)	Leighton Contractors Dawson Brown & Root JV Keppel Corporation Ove Arup Pty Limited	Winner of 1997 engineering excellence award Winner of 1998 Australian Construction Award $13m < budget, 26.5 mths vs. industry norm of 34 mths Refer "*Wandoo B Offshore Oil Platrform*" [15] www.mobil.com.au/company/tcexwan.htm
'94 - '97	**East Spar Project** WA (oil & gas) WMC Resources Ltd	Kvaerner Oil & Gas Clough Engineering	Winner of the IEAust's highest national engineering excellence award - the Sir William Hudson Award www.engaust.com.au/ea/1297coverstory.html
'96 - '99	**Hot Briquetted Iron (HBI)** WA (iron ore) BHP	Various	3 separate fabrication / construction alliances. Refer Thomson[11]
'97 – '00	**Northside Storage Tunnel Project** NSW ~$350m (water management) Sydney Water	Transfield Tunneling Connell Wagner Montgomery Watson Kilpatrick Green (sub-alliance)	Work currently on target to meet the completion deadline for the Sydney 2000 Olympics. Refer paper by Henderson & Cuttler[16] and report by Wallis[17]. www.engaust.com.au/ea/0998tunnelling6.html
'98 -	**National Museum Acton Point** ACT - Building Commonwealth Government	Ashton Raggatt McDougall Robert Peck von Hartel Trethowan, Civil & Civic, Tyco International Honeywell Ltd, Anway and Company	Scheduled to be open on 12 March 2001. www.nma.gov.au/aboutus/bustats.htm
'99 -	**Woodman Point Wastewater Treatment Plant Amplification** WA ~$120m WA Water Corporation	Clough Engineering Kinhill Group	Scheduled for completion by end of March 2002 www.clough.com.au/latestnews.htm www.awwa.asn.au/Branches/WAnews/WW/page11
'98 -	**Clean Fuels Project** Qld ~$350m (oil & gas) BP / BOC / Lend Lease	Stork ICM Kvaerner	Project currently underway
'98 – '99	**Penola West project** SA ~$6m (electricity transmission) ETSA - ElectraNet SA	Kilpatrick Green Burns and Roe Worley	Completed in 1999 on budget well ahead of schedule despite numerous externally imposed delays.
'99 – '00	**Pelican Point Project** SA ~$22m (electricity transmission) ETSA - ElectraNet SA	Kilpatrick Green Burns and Roe Worley	Energised in June 2000 months earlier than world best practice – and ~6% under budget.
'99 – '99	**Norman River Bridge ~$5m** QLD Department of Main Roads	Barclay Mowlem	Completion weeks earlier than the already tight target date prior to the 99-00 wet season, under budget and with outstanding support from the community.
'00 – '00	**Inner Northern Busway – Sect. 1** Qld ~$70m (urban development) QLD Department of Transport	Transfield Construction Queensland Henry Walker Eltin Contracting GHD Pty Ltd Halcrow Pacific Pty Ltd	Alliance terminated due to budgetary difficulties and apparently irreconcilable differences between state and local government agencies. Against these difficulties the alliance was acknowledged by all to have performed exceptionally well and the alliance model provided QT with the flexibility to respond to rapidly shifting political / economic circumstances without suffering undue commercial loss
'00 – '00	**Pacific Motorway Package #3** Qld ~$60m (road infrastructure) QLD Department of Main Roads	Thiess Contractors SMEC Australia	Converted balance of "distressed" traditional schedule of rates contract to alliance in a bid to reach Practical Completion by October 2000 – 3 months earlier than the previously forecast trend. On track for completion in September / early October 2000 despite various setbacks.
'00 – '02	Gladstone area Water Board **Awoonga Dam Raising Project**	SunWater PPK Consultants Thiess Contractors	Raising of the Awoonga Dam to AHD 40m and associated infrastructure relocation. Alliance formed in August 2000.

Myth or Fact?	Author's comment
Alliancing is easy	**Not really** *Alliancing is easier if players start off with a good understanding of alliance principles and previous experience in high performance alliance processes. However even then alliancing is generally more demanding than conventional contracting because it requires so much people management / focus and in a properly managed alliance "there is nowhere to hide"– it requires a lot more energy. However while it may be more demanding it is invariably a lot more enjoyable / satisfying for everyone involved.*
It is a low risk option for contractors	The overall risk is lower but the risk landscape is more complex *It is not really accurate to say that project alliancing is low risk for contractors. While the non-owner participants get to lay off more than ½ of the risks they would normally own 100%, they have to take a share of risks that they would never have to assume at all. However within this more complex risk environment their overall risk exposure is less than under a conventional contract (because of the risk cap). The overall risk is therefore lower but the risk landscape is more complex.*
It's just a form of cost plus	No *If set up as a true alliance as described in this paper, the compensation arrangements are definitely not cost plus.*
No cost certainty for owners ➡ more risky than conventional delivery model	On complex projects (that are suited to alliancing) the outturn cost is more certain. *The supposed certainty of contract sum under a conventional contract is often merely an illusion, especially on complex projects. It is true that the owner has little certainty at the time the alliance is formed. Even when the Target Cost is developed and agreed there is no guarantee. However the Target Cost is a forecast of true outturn cost and is usually a reasonably accurate forecast, unlike the tender price in complex projects where the owner has no assurance of what the eventual outturn cost will be.*
Can't do it for projects < $100m	It is suitable for projects <$100 million. *This has been demonstrated on several projects as low as $5m where alliancing was used very effectively. However the alliancing processes need to be modified for smaller projects to ensure optimum value outcomes.*
Can't do on building jobs	Can be used on building jobs. *By most accounts project alliancing is being used very effectively on the new Acton Point National Museum project in Canberra. However while the alliance model can be applied to specialised building projects (eg. hospitals, airports, museums, etc.) the author believes it may be impractical at this stage to use a full blown alliance on smaller conventional building projects due to the culture and subcontracting structure of the building industry.*
You can't impose an alliance after a job has been tendered competitively	It can be applied to existing distressed conventional contracts *While it can be (and has been) used to deal with distressed adversarial projects there are enormous difficulties in doing so and an alliance carved out of distressed projects, while great improvements can be realised, is unlikely ever to achieve the kind of outstanding outcomes that have been achieved on "clean born" project alliances.*
Decision-making is by committee ➡ slow and inefficient	Not correct (if properly managed) *In a well organised alliance decision-making should be much faster than in conventional contracts. The decision-making protocols are clearly defined and it is usually only at Alliance Board and sometimes Alliance Management Team level that decisions have to be unanimous. Day-to-day operations run along normal (but more effective) decision-making lines.*
Suppliers can't be brought into an alliance	Yes they can, but *PCI has not been involved in any major alliances where key suppliers were brought in as core Alliance Participants. It may not be practical for an equipment supplier to open up its manufacturing arm to open book scrutiny. However there is ample opportunity to have support / design / application services as part of the core alliance supported by pre-agreed preferential supply rates for equipment.*
There is no place for lawyers in the process	There is an important role, but one that must support the alliance process *Lawyers have a key role to play in establishing an alliance – ie. to ensure that the intent of the participants is embodied in a precise and legally binding agreement. It is important to ensure that the lawyers understand and support the process and provide the necessary service rather than driving the process away from its true course.*
It cannot be done on public sector projects for probity reasons	Alliancing can be used in public or private sector jobs. *For example - 9 of the projects listed in Appendix 1 are public sector projects.*

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