

Project Alliancing Practitioners' Guide

April 2006

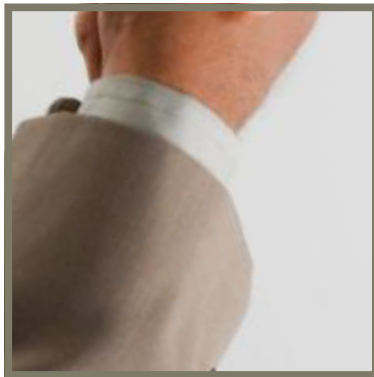
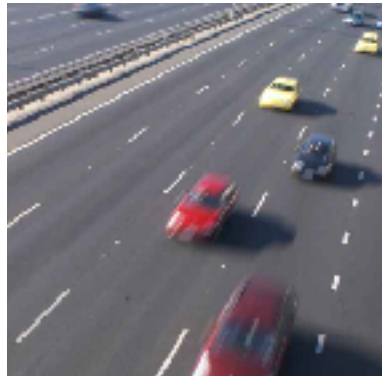
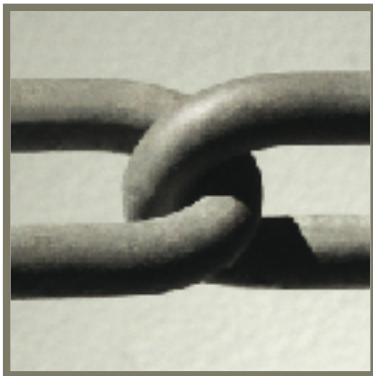


Table of contents

PART 1: INTRODUCTION TO ALLIANCING

1	Introduction to the Guide	2
1.1	Overview.....	2
1.2	Scope of application.....	4
1.3	Government approval process.....	5
1.4	Structure of the Guide	6
2	Introduction to project alliancing.....	8
2.1.1	Introduction	8
2.1.2	Phases of a project alliance	9
2.1.3	Risk allocation.....	9
2.1.4	Creating the right psychological foundation	10
2.2	Compensation framework	11
2.3	Governance	12
2.3.1	Overview.....	12
2.3.2	Alliance leadership team (ALT).....	13
2.3.4	Alliance management team (AMT)	14
2.3.5	The leadership factor	14
2.3.6	Managing inter-participant conflict	14
2.4	Legal framework.....	15
2.5	Single versus multiple TOC approach.....	15
2.6	Benefits and risks	17
2.6.1	Benefits.....	17
2.6.2	Risks.....	18
3	Selection of project alliancing.....	19
3.1	Introduction.....	19
3.1.1	Context	19
3.1.2	The procurement decision	20
3.2	Recommended process	21
3.2.1	Decision-making process.....	21
3.2.2	Step 1 – Primary tests.....	21
3.2.3	Step 2 – Analysis of procurement methods against project objectives	23
3.2.4	Step 3 – Supplementary comparative assessments	25

PART 2 KEY FEATURES OF THE ALLIANCE FRAMEWORK

4	Compensation framework	27
4.1	Introduction.....	27
4.1.1	Scope and context	27
4.1.2	The 3-limb compensation model.....	27
4.1.3	Principles for design of limb 3.....	28
4.1.4	Compensation during project development phase	28
4.2	Structure of the target cost estimate	28
4.2.1	Context	28
4.2.2	Sample target cost estimate	28
4.3	Limb 1 – reimbursement of costs	30
4.3.1	General principles.....	30
4.3.2	Application in practice	30
4.4	Limb 2 fee – corporate overhead and profit	31

4.4.1	Overview	31
4.4.2	Limb 2 – fixed or percentage of actual costs?	32
4.4.3	Principles and processes – establishing limb 2 fee%s	32
4.4.4	Components that attract limb 2 fee%	33
4.5	Limb 3 – pain/gain	34
4.5.1	Overview and general principles	34
4.5.2	Principles for establishing the target outturn cost and other targets	35
4.5.3	Owner alliance costs	35
4.5.4	Typical key result areas	35
4.5.5	Sharing pain/gain among NOPs	36
4.5.6	Dealing with variations	37
4.5.7	Generic model and worked examples	38
5	Value for money	39
5.1	Value for money in a project alliance	39
5.2	Value for money strategy	39
5.2.1	Overview of strategy	39
5.2.2	Summary of specific value-for-money initiatives	40
5.3	Project budget	44
5.3.1	Evolution of the project budget	44
5.3.2	Selecting the TOC from the TCE	46
6	Legal framework	47
6.1	Introduction	47
6.1.1	Context	47
6.1.2	Consolidated versus two-stage structure	47
6.1.3	Overall nature of the relationship	47
6.1.4	Overview of agreement/deed structure	48
6.1.5	Other legal obligations	49
6.2	Specific issues and approaches	50
6.2.1	Context	50
6.2.2	Setting the tone	50
6.2.3	Governance and decision making	51
6.2.4	Decision-making within the alliance management team	54
6.2.5	Dealing with conflicts of interest	55
6.2.6	Management systems and controls	55
6.2.7	Compensation, invoicing and payment	55
6.2.8	Dealing with variations	56
6.2.9	Extensions of time	57
6.2.10	Resolving alliance disagreements	57
6.2.11	Incorporating the principle of 'no blame'	57
6.2.12	Indemnities	59
6.2.13	Termination for convenience	60
6.2.14	Termination for default	60
6.2.15	Defects correction period	61
6.2.16	Intellectual property rights	62
6.2.17	Insurance under a project alliance	62
6.2.18	Sub-procurement issues	63
6.2.19	Usually allocated risks	64
6.2.20	Issues – interim project alliance agreement	64
PART 3: KEY STAGES IN ESTABLISHING AN ALLIANCE		
7	Establishing a project alliance	67
7.1	Overview of processes	67
7.1.1	General overview	67
7.1.2	Request for proposals development stage – overview	68
7.1.3	Overview of the selection process	69

7.1.4	Other considerations.....	70
7.2	Request for proposals stage	71
7.2.1	General.....	71
7.2.2	Step 1: develop/agree overall approach	71
7.2.3	Step 2: develop and commit to establishment schedule	72
7.2.4	Step 3: establish selection panel and evaluation procedures	72
7.2.5	Step 4: develop the RFP documents	73
7.2.6	Step 5: developing the owner's team.....	73
7.2.7	Step 6: early notice to industry.....	74
7.2.8	Step 7: engage financial auditor – establishment and independent estimator	74
7.3	Evaluation and selection	75
7.3.1	General.....	75
7.3.2	Sequencing and notifications	75
7.3.3	Interviews.....	76
7.3.4	Selection workshops.....	77
7.3.5	Panel debriefings to proponents	78
7.4	Commercial alignment.....	79
7.4.1	Key outcomes	79
7.4.2	Overview of process	80
7.4.3	Step 1: issue briefing papers	80
7.4.4	Step 2: FA-E briefing to financial officers	81
7.4.5	Step 3: auditor/IE kick-off meeting	81
7.4.6	Step 4: establishment audits and preliminary investigation.....	82
7.4.7	Step 5: commercial alignment discussions	82
8	Alliance implementation issues	84
8.1	Overview.....	84
8.1.1	Context/scope.....	84
8.1.2	Phases of the alliance: key deliverables	84
8.1.3	Project development phase	85
8.1.4	Implementation phase.....	85
8.1.5	Defects correction period.....	85
8.2	Specific implementation issues	86
8.2.1	Alliance management plan.....	86
8.2.2	Developing and agreeing the target cost estimate and target outturn cost	87
8.2.3	Effective project governance.....	88
8.2.4	Developing and sustaining the alliance culture	88
8.2.5	Alliance closure.....	89
	Appendix 1: Evolution of project alliancing	92
	Appendix 2: Program alliances.....	96
	Appendix 3: Single TOC approach rationale	99
	Appendix 4: Multiple TOC approach.....	101
	Appendix 5: Examples of comparative assessment of outcomes	102
	Appendix 6: IPAA/PAA versus single alliance agreement.....	105
	Appendix 7: Further discussion of limb 1 issues	107
	Appendix 8: Further discussion of limb 2 issues	109
	Appendix 9: Further discussion of limb 3 issues	111
	Appendix 10: Generic compensation model with worked examples	114
	Appendix 11: Specialist advisers and their roles.....	126
	Appendix 12: Further discussion of issues before RFP release	132
	Appendix 13: Further discussion of issues during proponent selection	138
	Appendix 14: Related documents.....	139
	References and further reading.....	140

Acronyms

AAA	Alliancing Association Australasia, formerly the Alliance Industry Association
AFA	alliance financial auditor
ALT	alliance leadership team
AMT	alliance management team
AOC	actual outturn cost
DCP	defects correction period
DOI	Department of Infrastructure (Victorian)
DTF	Department of Treasury and Finance (Victorian)
EOI	expression of interest
FA-E	financial auditor – establishment
FIDIC	Federation Internationale des Ingenieurs-Conseils (<i>International Federation of Consulting Engineers</i>)
GBE	government-backed enterprise
GRP	Gateway Review Process
GST	goods and services tax
IE	independent estimator
IP	intellectual property
IPAA	interim project alliance agreement
IRR	internal rate of return
JV	joint venture
KPI	key performance indicator
KRA	key result area
NEC	New Engineering Contract (<i>set of contracts in the UK</i>)
NOP	non-owner participant (Note that this includes any service provider such as designers, constructors, specialist consultants, etc. and could also include an agency or government-backed enterprise acting as a service provider rather than owner.)
NPV	net present value
POS	overall performance score
PAA	project alliance agreement
PAB	project alliance board
PI	professional indemnity
PV	<i>Partnerships Victoria</i>
QT	Queensland Transport
REOI	request for expressions of interest
RFP	request for proposals
SPV	special purpose vehicle
SRO	senior responsible owner
TCE	target cost estimate (<i>refers to an entire estimate</i>)
TOC	target outturn cost (<i>refers to a single number – the bottom line of the TCE</i>)
VFM	value for money

2 Introduction to project alliancing

2.1 Overview

2.1.1 Introduction

Project alliancing involves the collaboration of owner and non-owner participants to deliver the capital phase of a project, with all participants sharing the responsibility for project risks and for achieving project objectives. The project alliance model creates a commercial framework where all participants win or all lose, depending on their collective performance⁶ against agreed project objectives. This creates both an incentive to achieve project objectives and a 'best for project' focus among participants.

In comparison with traditional forms of procurement, project alliances rely more on developing trust and strong relationships to drive performance than on the legal and contractual relationship between participants.

Project alliances are based on clearly understood principles to which all participants are fully committed. A project alliance is typically founded on the following generic principles:

- All participants win, or all participants lose, depending on the outcomes actually achieved.
- The participants have a peer relationship where each has an equal say in decisions for the project.
- Risks and responsibilities are shared and managed collectively, rather than allocated to individual participants.
- Risks and rewards are shared equitably among the participants.
- All participants provide 'best-in-class' resources.
- The participants are committed to developing a culture that promotes and drives innovation and outstanding performance.
- There is a clear definition of responsibilities in a no-blame culture.
- All transactions are to be fully open-book.
- Communication between all participants is open, straight and honest.

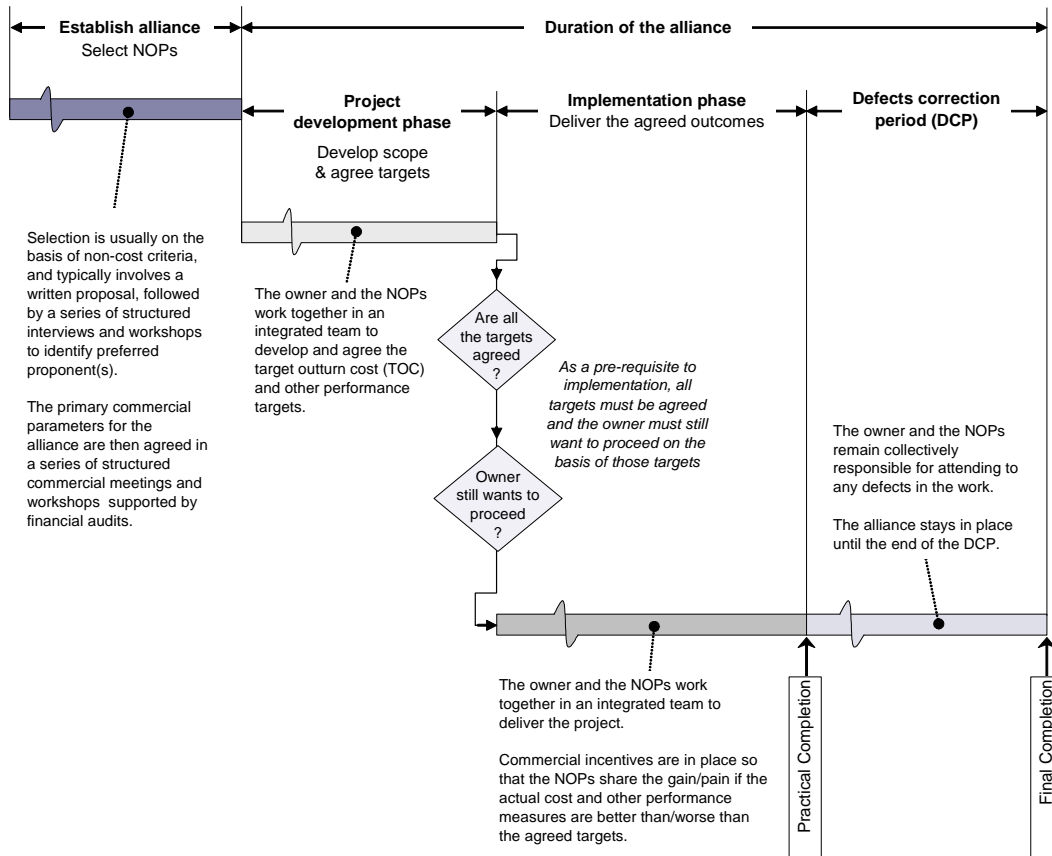
Important decisions should be made on a 'best for project' basis according to the principles above and not on the basis of organisational positions.

⁶ In the context of a project alliance, where obligations are collective, it is generally not relevant or appropriate to refer to the performance of individual participants. References to 'performance' in this Guide mean the collective performance of the alliance participants, unless stated otherwise.

2.1.2 Phases of a project alliance

Figure 2.1 provides an overview of the typical phases in the establishment and delivery of a project using project alliancing.

Figure 2.1: Project alliancing project delivery – typical phases



2.1.3 Risk allocation

Under a traditional form of contract, different parties have specific individual obligations, and risks are generally allocated to the party considered best able to manage them. There are commercial/legal consequences where a party performs poorly or fails to fulfil their obligations properly.

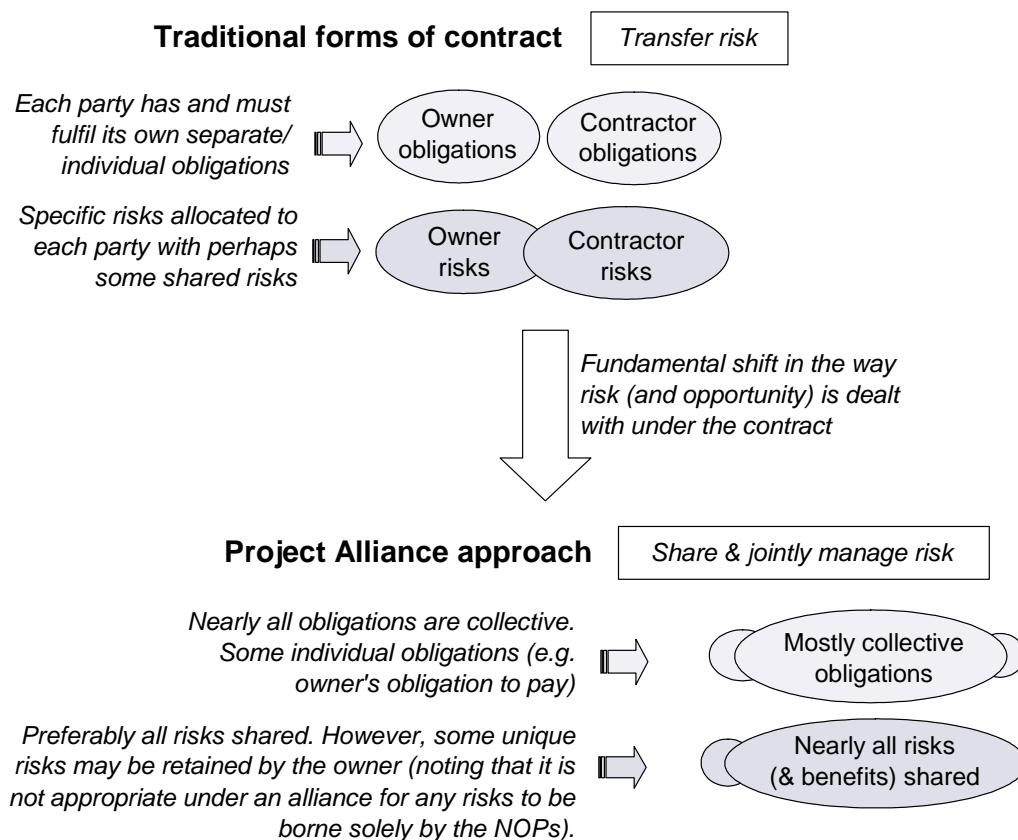
Under a project alliance, risks and responsibilities are shared and managed collectively, rather than allocated to individual parties. Performance targets, including the targeted cost of the project (target outturn cost/TOC), are developed and agreed by the participants during the project development phase.

Once the performance targets have been agreed, the alliance participants assume collective ownership of the risks and responsibilities associated with delivery of the project, with equitable sharing (in pre-agreed ratios) of the 'pain' or 'gain', depending on how project outcomes compare with pre-agreed targets. Although risks (and opportunities) are collectively 'owned', and are not directly linked to the performance of individual alliance participants, the quantifiable impact of these risks and benefits is still precisely allocated

through the pain/gain arrangements.

The difference in risk allocation between traditional contracts and project alliances is illustrated in Figure 2.2.

Figure 2.2: Characteristics of traditional contracts and project alliances



2.1.4 Creating the right psychological foundation

Entering into a project alliance is a different 'psychological bargain' than a traditional contract requires. It is integral to the success of a project alliance that all participants understand the importance of the human dimension to the alliance process.

The structures, processes and leadership within a project alliance should support the development of a peak performance alliance culture and maintain it throughout the project.

To create this kind of environment, there must be a comprehensive program to manage the sociological aspects of the project and the psychology of the relationships – i.e. strategies that focus on people, the relationships they form, their beliefs and aspirations, their commitments and their behaviours. The driving force should be an absolute commitment to meeting or exceeding specific and demanding project objectives. The alliance framework is designed to create a psychological foundation for the commercial relationship where:

- The relationship is established on the premise of mutual trust, based on a recognition that trust must be earned and that there must be a commitment to earn that trust through particular behaviours and results.
- Actions are based on clearly articulated and well understood principles, not on

individual positions or self-interest.

- The best and only way to serve the interest of any one participant is to advance the interests of the alliance so that there is no need for any hidden agendas.

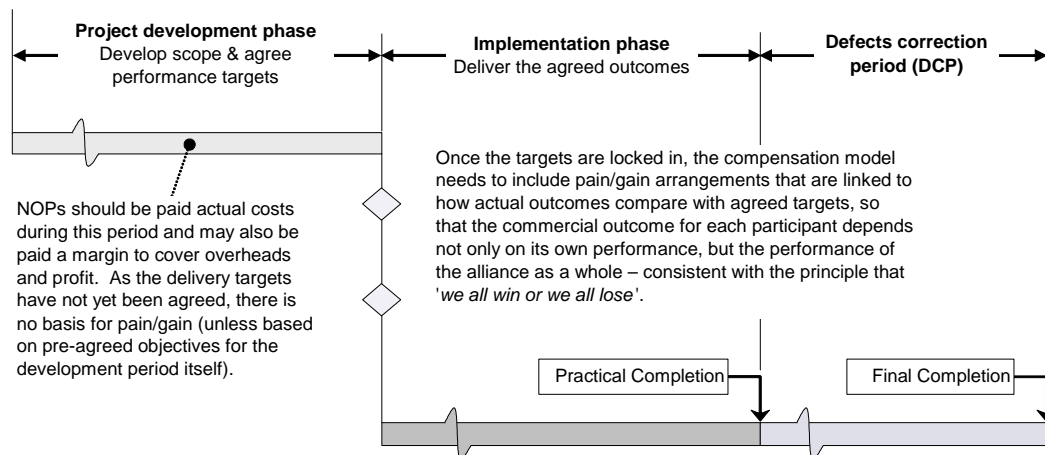
2.2 Compensation framework

The compensation framework of an alliance is a key mechanism for aligning the objectives of the NOPs with the project objectives. Under a project alliance, the owner and the NOPs develop and scope the project jointly and agree a target cost and performance targets. The alliance participants then take collective responsibility for delivering the project and achieving the agreed targets, sharing in financial pain or gain, depending on how actual outcomes compare with the agreed targets.

Once the target cost and performance targets are locked in, compensation to the NOPs during the delivery phase of the project can be characterised as a '3-limb model', where each NOP is paid as follows:

- Limb 1 = Expenditure on the work under the alliance and project-specific overheads related to that work are reimbursed at actual cost, subject to audit.
- Limb 2 = This involves a fee to cover 'normal' profit and a contribution towards recovery of non-project-specific (i.e. corporate) overheads.
- Limb 3 = In this limb of the model, there is an equitable pre-agreed share of the 'pain' or 'gain', depending on how actual outcomes compare with pre-agreed targets (in both cost and non-cost performance areas). Normally, the NOPs' downside risk is capped at the loss of the limb 2 fee.

Figure 2.3: Project alliance compensation model and phases



During the development phase of the project, when the owner and the NOPs are developing and scoping the project and performance targets, the NOPs are generally reimbursed for their actual costs, with a margin for profit and overheads (i.e. compensation is usually limited to limbs 1 and 2 only).

The pain/gain arrangements should be designed to ensure that the NOPs assume an equitable share of the pain/gain, along with the owner, where actual outcomes are worse or better than the agreed targets. This is consistent with the principle that 'all participants win, or all participants lose, depending on the outcomes actually achieved'.

Chapter 4 of the Guide covers how to set up the compensation arrangements for a project alliance and describes a generic compensation model that can be applied to most (single) project alliances.

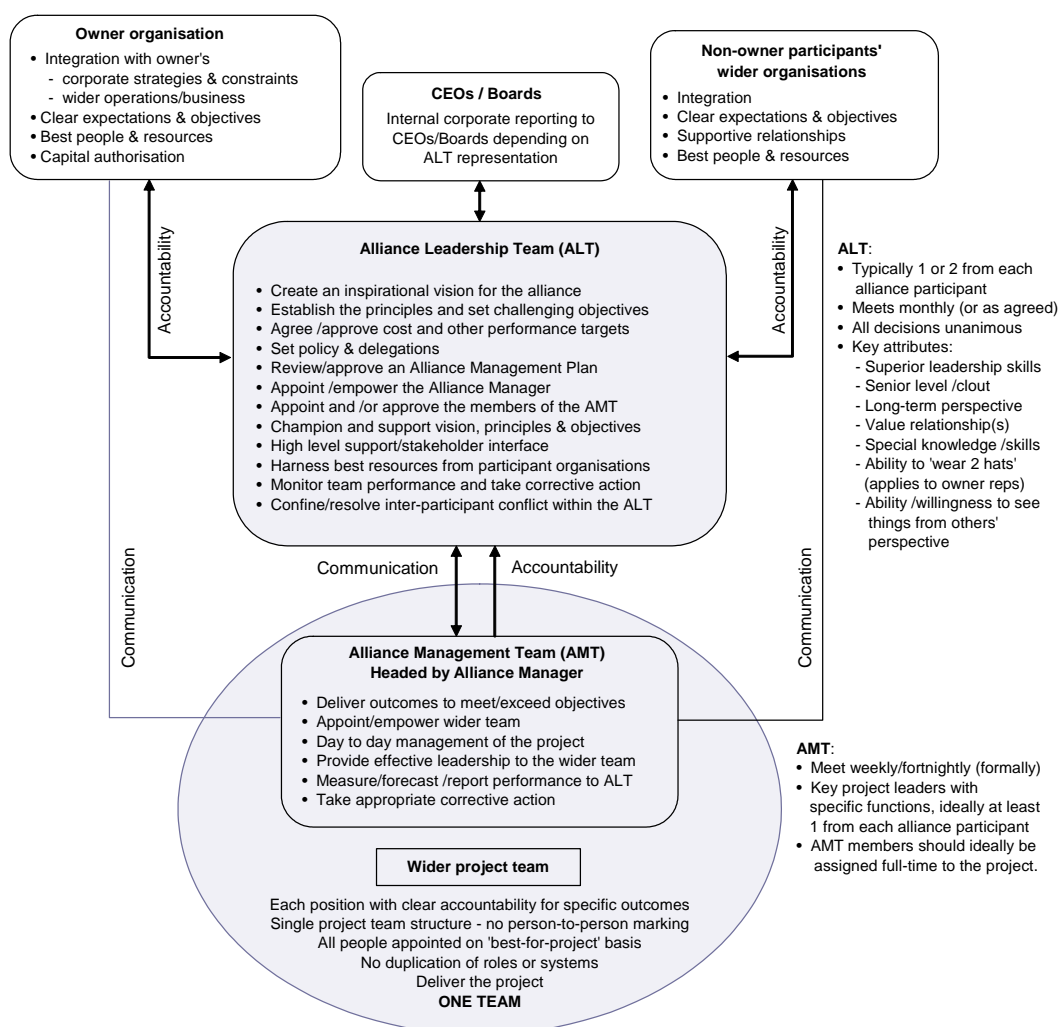
2.3 Governance

2.3.1 Overview

Project alliances operate as 'virtual organisations' performing all of the functions required to deliver a project. In these alliances, the commercial interests of each alliance participant are best served by meeting or exceeding the agreed alliance objectives.

The structure in Figure 2.4 is generally used for the governance, leadership and management of alliances.

Figure 2.4: Project alliance governance and management typical framework



Typically an alliance is formed between the owner and one or more NOPs who collectively have most of the critical resources needed to deliver the project. The alliance team is responsible for procuring all goods and services required to deliver the project, on a 'best for project' basis.

This generally includes:

- services provided from the in-house resources of alliance participants (e.g. project management, planning, design, procurement, construction and other areas requiring inputs of staff, labour, equipment etc.);
- engagement of consultants, constructors and others to provide services not available from the in-house resources of project alliance participants, or services that can be procured more efficiently from an external source; and
- purchase of materials, plant, assets, commodities etc. from external sources.

The project alliancing model aims to create an alliance of high calibre resources working 'as if they own the company' where behaviours at all levels of the project (including consultants, contractors and suppliers, not just the alliance participants themselves) are in line with agreed values and work towards achieving the overall project objectives.

2.3.2 Alliance leadership team (ALT)

The alliance leadership team⁷ (ALT) consists of senior representatives from each of the alliance participants. The team provides leadership, governance and oversight to the alliance. The overriding function of the ALT is to ensure that the alliance achieves its objectives and that the participants fulfil all their alliance obligations, while also satisfying the corporate requirements and constraints of all alliance participants.

Consistent with the principle that 'the participants have a peer relationship where each has an equal say in decisions for the project', all decisions of the ALT related to the alliance must be unanimous. For the ALT to function effectively, ALT members need the right attributes, including:

- superior leadership skills, including an ability to challenge their own preconceived ideas and a commitment to further develop their leadership capabilities through the alliance;
- delegated authority and the ability to make high-level ALT decisions on behalf of their organisation;
- a long-term perspective on the business aspirations and strategies of their respective organisations and a high regard for the relationships with the other participants;
- particular skills in an area that will add value to the alliance; and
- the ability to 'wear two hats' to ensure that both their organisation and the alliance achieve their objectives, and an ability and willingness to see things from each other's perspective.

In addition, government representatives on the ALT need to have:

- the ability to secure timely support from higher authorities for proposed ALT decisions where matters are outside their level of delegated authority; and
- the ability to lead their respective organisations through the cultural change necessary to participate effectively in a successful project alliance.

⁷ For consistency, the term alliance leadership team (ALT) is adopted in this Guide, although the term project alliance board (PAB) is also used widely elsewhere.

2.3.4 Alliance management team (AMT)

Day-to-day leadership and management of the project is the responsibility of an alliance management team (AMT), headed by an Alliance Manager who is accountable for ensuring that the alliance meets or exceeds the agreed alliance objectives.

The AMT provides day-to-day leadership to the wider project team and manages the day-to-day activities of the alliance. Each member of the AMT and the wider team is appointed on the basis that they are the people best qualified to fulfil their role, not on the basis of which company employs them. The AMT consists of senior project personnel, preferably people who are working full-time on the project (although it may be unavoidable or even appropriate that some members of the AMT are only part-time on the project). While it is preferable that each participant is represented on the AMT, this should not take precedence over the principle that each role should be appointed on a 'best person for the job' basis.

2.3.5 The leadership factor

As in any successful organisation, the drive and commitment must come from the top. Under a project alliance, the ALT and AMT each play a critical role in providing effective leadership to turn the aspirations and commitments of the alliance participants into reality.

As the peak leadership body within the alliance, the primary role of the ALT is to create and sustain an environment in which the alliance objectives can be met or exceeded. Similarly, the AMT, as a leadership group, must create and sustain an environment conducive to producing the results it has committed to.

2.3.6 Managing inter-participant conflict

The aim of any alliance is to create a seamless organisation without duplication of responsibilities, free from an 'us and them' attitude. To the extent that the interests of the individual participants need to be considered separately from the interest of the alliance, then such conversations should take place at the ALT. One of the key functions of the ALT is to ensure that inter-participant conflict is confined to and resolved within the ALT itself.

One of the owner's roles as an alliance participant is to manage certain inherent tensions, including:

- the alliance's focus on achieving agreed targets, versus the need for proper quality checks and balances;
- a commitment to establishing breakthroughs, balanced with an understanding of proven and often long-standing pre-existing standards;
- reaching alignment on the TOC and other performance targets; and
- managing unmatched or diverging priorities after the TOC has been locked in, where the priorities of the owner may not fully match the priorities of the NOPS or the stated objectives of the alliance.

2.4 Legal framework

A key feature of project alliancing is the absence of legal recourse between participants, except in the event of wilful default and acts of insolvency.

A project alliance is a complex business relationship and the expectations, rights and obligations of the participants must be set out in clear terms in a legally binding contract – referred to in this Guide generally as an 'alliance agreement'. Chapter 6 of the Guide examines the alliance legal framework and provides guidance on how to structure an alliance agreement.

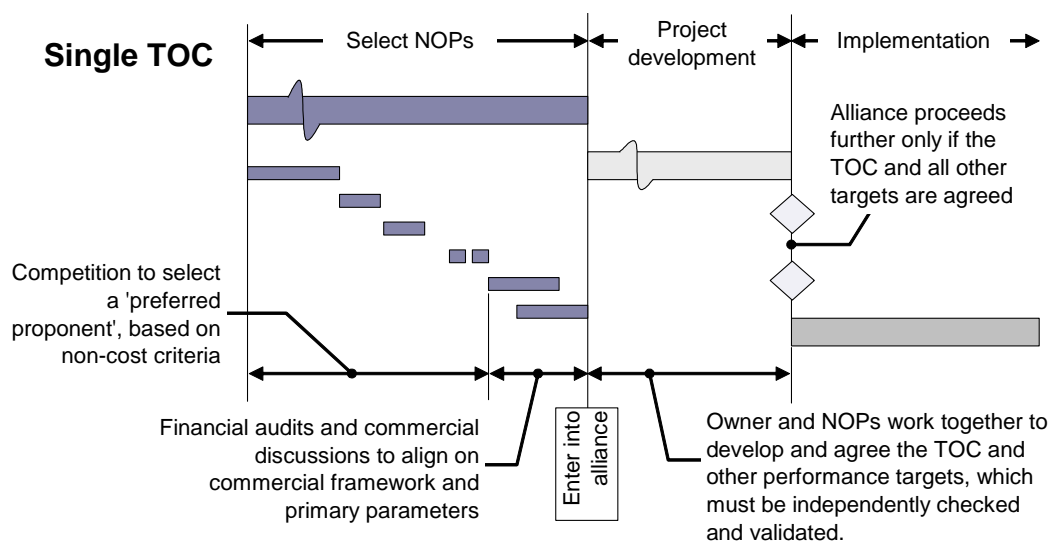
2.5 Single versus multiple TOC approach

There are two alternative approaches to establishing a project alliance, the single and the multiple TOC approach.

In the single TOC approach, a preferred proponent is selected on the basis of non-cost criteria, and, following a series of meetings and financial audits, the owner and the preferred proponent agree the commercial framework and primary parameters for the alliance.

The owner and the non-owner participants then work together as an integrated team through the project development phase to develop the target outturn cost (TOC) and other performance targets for the project. Once the targets are agreed, the alliance team works together to deliver the project with the aim of achieving or doing better than the agreed targets. Figure 2.5 outlines this process.

Figure 2.5: Single TOC approach in outline



As the single TOC approach does not include direct price competition, it requires comprehensive strategies to ensure that the alliance delivers value for money and is able to demonstrate this. These strategies are discussed in detail in Chapter 5.

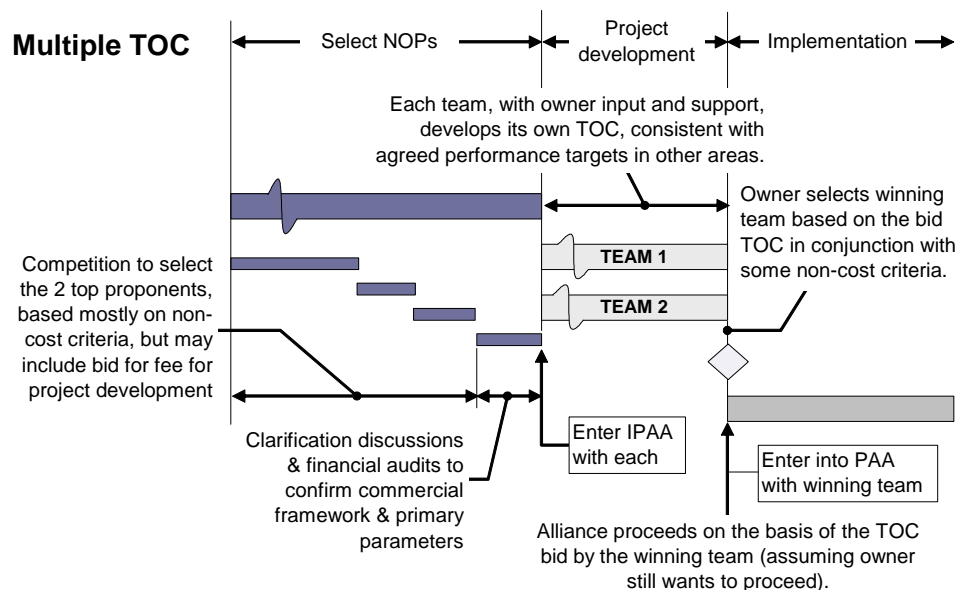
The alternative multiple TOC approach has arisen primarily in response to concerns that, in the absence of direct cost competition in the single TOC approach, the non-owner

participants (either knowingly or subconsciously) may take an unreasonably conservative approach to the development of the TOC and performance targets, especially to risk provisions/contingencies that are highly subjective and difficult to benchmark.

In the multiple TOC approach, the owner selects the two preferred proponents and negotiates separately with each to agree the commercial parameters for the alliance. The owner then enters into an interim project alliance agreement (IPAA) with each group to develop separate TOCs, and other performance targets.

The owner then selects a preferred proponent on the basis of the lowest or best TOC and some non-cost criteria, and enters into a project alliancing agreement (PAA) with that proponent to deliver the project. Figure 2.6 shows the typical multiple TOC process.

Figure 2.6: Multiple TOC approach in outline



The single TOC approach, the more commonly adopted of the two methods, is the recommended approach in this Guide. Appendix 3 examines the reasons for this in more detail. The multiple TOC approach may be appropriate where the nature of a project means that in selecting the preferred proponent:

- the owner must make a choice between competing proprietary technologies/solutions; and
- the choice of technology could have a substantial impact on the capital and/or the operating cost of the project or facility.

This Guide does not provide comprehensive guidance on the use of the multiple TOC approach. However, it is noted that the processes for selection and project development in this approach vary considerably from the single TOC approach. Appendix 4 highlights a number of areas to be aware of when adopting the multiple TOC approach.

2.6 Benefits and risks

2.6.1 Benefits

The key benefits of the project alliance model include:

- The commercial framework creates a joint 'best for project' focus among all participants by creating incentives that align all participants' objectives.
- There is an improved ability to manage risks, such as material changes to the project and uncertainty, due to:
 - a shared responsibility and incentive for all participants to be proactive in mitigating and/or managing risk; and
 - collaboration between more pools of resources.
- Earlier involvement of construction and cost planning expertise in the pre-construction planning phase leads to more informed decision making.
- The elimination of the need for resources to administer contractual activities (i.e. site surveillance, variation claims administration, resolving disputes, litigation) means that such resources can be refocused on achieving project objectives.
- There is a strong focus on encouraging and enabling high performance and innovation.
- The collaboration of the organisations provides a development opportunity for both owner and non-owner participants through:
 - exposure to phases of the project not normally managed by their organisation;
 - undertaking roles not normally available within their organisation;
 - gaining an insight into other organisations' processes, practices and issues; and
 - developing industry networks.

In addition to these benefits, some key benefits of project alliancing for owner participants include:

- The pricing of the project, including all contingencies and allowances for risk, is transparent, giving the owner greater confidence in the robustness of the budget and its achievability.
- It is more likely that project objectives will be achieved because of the increased incentives for non-owner participants to achieve them.

Some key benefits of project alliancing for non-owner participants include:

- superior returns available for outstanding performance;
- a cap on exposure to risks of loss of profit and corporate overheads;
- a broader and more effective level of influence on the project; and
- an enhanced reputation if the alliance is considered to have performed well.

2.6.2 Risks

The key risks or downsides of the project alliance model include:

- The absence of legal recourse against participants is limited to acts of wilful default and acts of insolvency.
- All participants are required to accept a broader range of risks than they would normally accept, and they are liable for the behaviour and performance of the other project participants, which is beyond their control.
- The absence of price competition in the development of the TOC and performance targets can lead stakeholders to question the veracity of these targets, and whether value for money is achieved.
- A change in a key player can seriously undermine the alliance.
- Project alliances typically require significantly more involvement by senior representatives than traditional forms of contract.

In addition to these risks or downsides, other downsides of project alliancing for owner participants include:

- There is no cap on the potential cost of the project.
- Substantial resources and a very high level of input from senior management are required to establish and maintain an alliance. These resources can be difficult to source.
- The ability to make unilateral decisions on the project is constrained, since any such decisions may reset the commercial framework.
- There is potential for misuse by NOPs, as with other contracting methods, by:
 - promising an 'A team' during selection process but providing the 'B team';
 - unfair or inflated allocation of costs to the alliance; or
 - an unreasonable approach to resolving commercial issues (i.e. variations).

Some key risks or negative aspects of project alliancing for non-owner participants include:

- The non-owner participants' total profit and overhead are at risk.
- There could be serious damage to reputations if the alliance is considered to have performed badly.
- For designers and consultants, the cost of tendering may be higher compared with alternative forms of procurement. (For contractors, the tender process is not necessarily more expensive than other forms of procurement, though it does require a much higher level of commitment from senior management, rather than business development personnel.); and
- It may be difficult to support normal business activity while providing appropriate priority and support for the alliance.

4 Compensation framework

4.1 Introduction

4.1.1 Scope and context

While risks (and opportunities) are collectively 'owned' under a project alliance, risks and benefits are effectively allocated through the pain/gain arrangements. It is therefore important that the compensation arrangements are set out clearly in the alliance agreement and properly understood by the participants. Chapter 4 discusses the compensation framework, suggests key principles and describes a generic compensation model that can be adapted to most (single) project alliances. Worked examples are provided in Appendix 10. Key commercial principles are discussed throughout Chapter 4.

4.1.2 The 3-limb compensation model

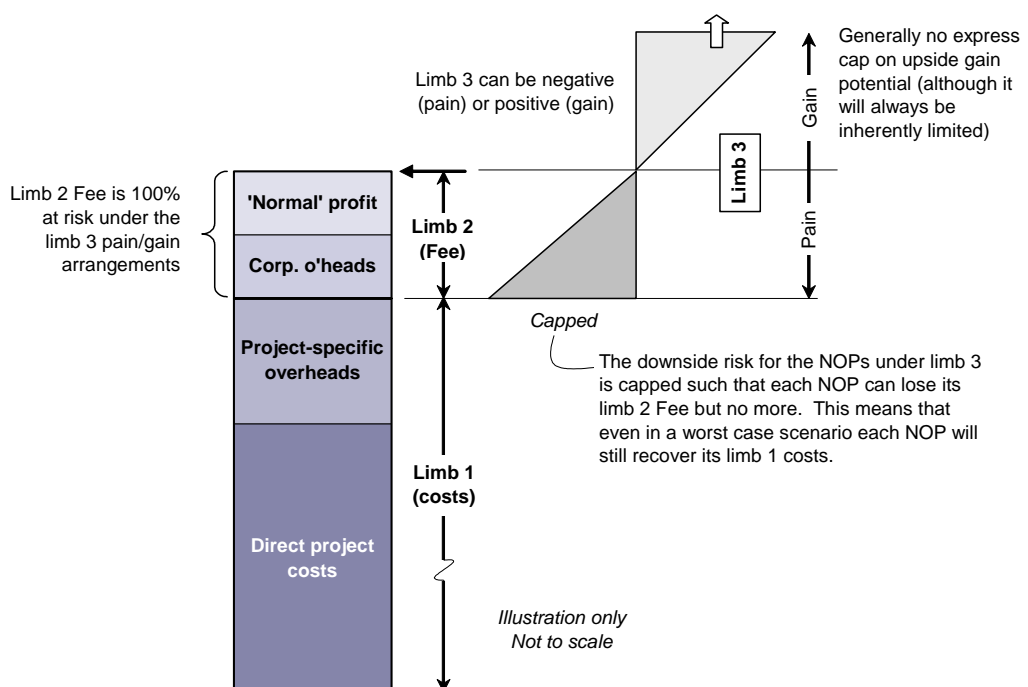
During the development of the target cost estimate (TCE), the target cost of the project, performance targets are agreed and compensation to the NOPs could be characterised as a '3-limb model', illustrated in Figure 4.1, where each non-owner participant (NOP) is paid as follows:

Limb 1: Expenditure on the work under the alliance (including mistakes, rework and wasted effort) and project-specific overheads related to the work under the alliance are reimbursed at actual cost, subject to audit.

Limb 2: A fee (the fee) to cover 'normal' profit and a contribution towards recovery of non-project-specific (i.e. corporate) overheads

Limb 3: An equitable pre-agreed share of the 'pain' or 'gain', depending on how actual outcomes compare with pre-agreed targets (in both cost and non-cost performance areas)

Figure 4.1: 3-limb compensation model



4.1.3 Principles for design of limb 3

The pain/gain arrangements should be designed to ensure that the NOPs assume an equitable share of the pain/gain, along with the owner, where actual outcomes are worse/better than the various targets agreed by the alliance. This is consistent with the principle that 'all participants win, or all participants lose, depending on the outcomes actually achieved'. The pain/gain mechanisms should generally be jointly developed in line with the guiding principles set out in section 4.5.1.

4.1.4 Compensation during project development phase

During the project development phase (i.e. the interim project alliance agreement (IPAA) period if the IPAA/PAA approach is used) compensation is limited to limbs 1 and 2 only, noting that:

It may be appropriate in some circumstances to make payment of some or all of the limb 2 fee conditional on reaching alignment on the performance targets.

Generally there is no limb 3 pain/gain component, since the performance targets have not yet been established/agreed. There may be situations where it makes sense to introduce limb 3 pain/gain based on specific outcomes (agreed before the start of the alliance) of the project development phase itself. However, this needs careful consideration as the introduction of incentives may be more of a hindrance than a help at this critical stage when the alliance is being established and implementation targets are being developed.

4.2 Structure of the target cost estimate

4.2.1 Context

During the project development phase, the owner and the NOPs, working as an integrated team, develop and agree on the various performance targets that form the basis for the limb 3 pain/gain arrangements, specifically:

- the target cost estimate (noting that the TCE refers to the whole estimate, while the TOC is the bottom-line figure in the TCE);
- other performance targets, along with full details of how they will be measured.

4.2.2 Sample target cost estimate

The hypothetical example showing a high level summary of the TCE for a notional \$100 million infrastructure project is used here to illustrate the methodology for calculating the limb 2 fee and the pain/gain under limb 3.

For ease of explanation, the sample TCE is based on the relatively simple situation of having one constructor (NOP1) and one designer/consultant (NOP2). While in practice the situation could be a lot more complex – with multiple constructors and consultants, specialist suppliers or technology providers, even multiple owners – the basic principles/mechanisms will remain the same as illustrated in Table 4.1.

Table 4.1: Target cost estimate for a notional \$100m infrastructure project

A	B	C	E	H
	Element	Pre-TOC (actual)	Post-TOC	Combined
Owner	Staff	250,000	1,000,000	1,250,000
	Consultants	450,000	750,000	1,200,000
	Other directly incurred costs	200,000	1,150,000	1,350,000
	Expenses	100,000	350,000	450,000
	Risks/unallocated contingency	-	1,247,000	1,247,000
NOP1 (constructor)	Salaried personnel	1,000,000	3,600,000	4,600,000
	Construction plant	-	12,000,000	12,000,000
	On site wages	-	13,000,000	13,000,000
	Materials	-	17,000,000	17,000,000
	External hired equipment	-	7,900,000	7,900,000
	Subcontract	600,000	11,000,000	11,600,000
	Site amenities and facilities	650,000	3,000,000	3,650,000
	Other project-specific overheads	300,000	2,500,000	2,800,000
	Provisions for specific risks	-	5,000,000	5,000,000
NOP2 consultant	Salaried personnel	1,000,000	3,500,000	4,500,000
	Contract staff	-	550,000	550,000
	Subconsultants	-	400,000	400,000
	Expenses/other costs	450,000	550,000	1,000,000
Totals		5,000,000	84,497,000	89,497,000
		NOP limb 2 Fee\$ (calculation explained further below)		10,503,000
		TOC (comprising owner costs + NOP limb 1 + NOP limb 2)		100,000,000

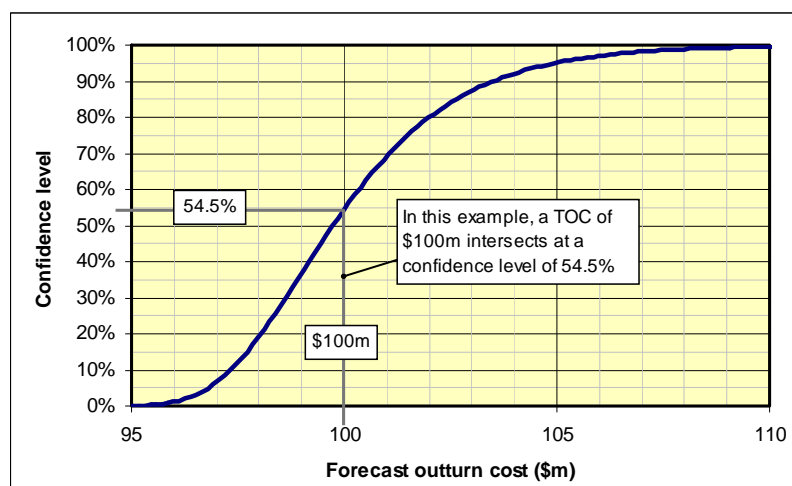
Some points to note about the TCE in general and the sample TCE above in particular:

- The TOC consists of several distinct components:
 - the alliance's estimate of the amount that will be incurred directly by the owner and allocated to the alliance cost ledgers (i.e. 'owner alliance costs'). There will be many other owner costs outside the TCE, such as those relating to project planning, property resumptions, the financial auditors in the establishment stage and for the alliance project, the independent estimator (IE), internal overhead charges, and other costs for establishing the alliance;
 - the alliance estimate of the NOP's limb 1 costs (discussed further in section 4.3);
 - the NOP's limb 2 fee (calculation is explained in section 4.4.1).
- The owner would also typically make some further provision/contingency (outside the TCE) to cover:
 - the owner's share of possible cost overruns;
 - amounts the owner might end up paying to the NOPs for achieving better-than-targeted outcomes in non-cost KRAs; and
 - contingency against alliance variations.
- It is recommended that the amounts already incurred during the project development phase are included as part of the TCE (as shown in the sample TCE). At the time the TCE is agreed, the costs up to that time are already known.
- Although it is expected that variations, if any, will be very limited, the alliance agreement needs to include a mechanism for adjusting the TOC and other targets if

there are variations. (See discussions on variations in section 6.2.8 and section 4.5.6.)

- The TOC is locked in as a single point estimate. However, as is discussed later in section 4.5.2, the alliance's estimate should be in the form of a cost probability distribution. The TOC is then determined by selecting a particular point along the cost distribution curve. In the example below, a TOC of \$100 million equates to an intersection point of 54.5 per cent. While each case needs to be considered on its own merits, as a general principle the intersection point for selecting the TOC should lie between the median (the P50 point) and the mean, unless there are compelling reasons for selecting a point outside this range (see further discussion in sections 4.4.3 and 4.5.2).

Figure 4.2: Cost probability distribution curve



Section 4.4.3 sets out various principles for establishing the TOC and other performance targets.

4.3 Limb 1 – reimbursement of costs

4.3.1 General principles

The guiding principles for reimbursement under limb 1 are straightforward.

- Each NOP is reimbursed their actual costs incurred on the project, including costs associated with mistakes and rework. (The sharing of pain/gain under limb 3 ensures that each NOP shares equitably in the pain associated with wasted effort and rework.)
- Reimbursement under limb 1 must cover actual costs – no more and no less. It must not include any contributions to corporate overhead or profit. There are no contributions to administrative or support functions not directly involved in performing the work under the alliance agreement and under the Alliance Manager's control.
- All costings and financial transactions are 100 per cent open book and subject to audit.

4.3.2 Application in practice

To ensure these principles are adhered to in practice, the following steps are recommended.

1. Explain the proposed commercial framework clearly in the RFP documents, including a clear statement on the underlying commercial principles.
2. Before entering into the alliance, conduct establishment audits to ensure that everyone is aligned on what is intended to be reimbursable under limb 1 and how it will be costed and verified in practice. It should be clear what kind of things limb 2 is intended to cover and which will therefore not be directly reimbursable under limb 1.

Typically limb 1 will cover staff, wages, use of NOP-owned plant and equipment, direct project expenses, purchases including subcontracts and suppliers, etc. Limb 2, in addition to profit, covers items generally considered to be corporate or non-project-specific overheads. Rather than list what is covered by limb 2, one approach used in some alliance agreements is to state that limb 2 is deemed to cover any items not reimbursable under limb 1. On this basis, it is very important that the establishment audits confirm everyone's understanding of what is actually reimbursable under limb 1.

3. Owner and NOPs jointly develop and agree a rigorous audit verification regime (detailed in a compensation audit plan).
4. Implement and adhere to the compensation audit plan.

Determination of limb 1 is relatively straightforward for some organisations (although it still requires rigorous costing and audit). For instance, the demarcation between limb 1 and limb 2 is fairly clear for a constructor where project costs are generally site-based and quite separate from corporate overhead costs and structures. For a designer/consultant, it is generally more complicated because, in their normal business operations, project work is conducted from a central office that also houses their corporate facilities and there is no easy way to distinguish between project-specific and corporate overheads.

Appendix 7 sets out some key issues to be addressed in administering limb 1 properly.

4.4 Limb 2 fee – corporate overhead and profit

4.4.1 Overview

Each NOP should be paid a fee that reflects their 'normal' business margin for corporate overheads and normal profit, consistent with the scope and context of the alliance and the principles discussed later in section 4.4.3. In practice, before entering into the alliance, a percentage figure is agreed (fee%) for each of the NOPs (by referring to the findings of the establishment audits). This is calculated on the basis that the fee% will be used to calculate the limb 2 fee, either:

1. as a fixed lump sum (fee\$) by applying the fee% to appropriate elements within the TCE in the way shown in Table 4.2 once the TOC is locked in; or
2. as a percentage of actual costs by applying the fee% to appropriate components of actual costs as incurred.

Whichever method is used, at the time the TOC is locked in, the amount included for the limb 2 fee is the same – as illustrated in Table 4.2 using the sample estimate.

Table 4.2: Limb 2 fee calculation, notional \$100m project

A	B	I	K	N	O
	Element	Estimated \$	Make-up of the Fee\$s		
			Fee%s	Fee\$	NOP Fee\$
Owner	All estimated owner alliance costs	5,497,000	n/a	n/a	n/a
NOP1	All estimated NOP1 costs	77,550,000	11.00%	8,530,500	8,530,500
NOP2	Salaried personnel	4,500,000	40.00%	1,800,000	1,972,500
	Contract staff	550,000	15.00%	82,500	
	Subconsultants	400,000	10.00%	40,000	
	Expenses /other costs	1,000,000	5.00%	50,000	
Totals		89,497,000		10,503,000	10,503,000
Limb 2 Fee\$s		10,503,000	←		
TOC		100,000,000			

Some points to note about the limb 2 fee in the example above:

- If the fixed fee approach has been adopted, then the limb 2 fee\$ will remain fixed regardless of whether the actual cost is more than or less than the amounts estimated within the TCE. If the latter approach is used, then the limb 2 fee will be more or less than the figure that appears in the TCE, depending on whether the actual cost is more or less than the TOC.
- The fee%s used in the example are purely hypothetical. In this respect:
 - The constructor fee% is indicative only. The actual fee% can vary significantly, depending on the industry sector and the type and size of the project. The fee% should be based on actual overheads and demonstrated profit record as verified through the FA-E and following the guiding principles discussed in section 4.4.3.
 - The consultants' fee%s are indicative only. They can vary widely depending on how the office costs are allocated between limb 1 (directly reimbursable) and limb 2 (part of the fee\$) and how the organisation normally spreads its margin across the different inputs. The actual elements and associated percentages need to be agreed during the commercial discussions, based on the feedback from the establishment audits.
 - No inference should be taken from any of the hypothetical figures used in the example. The fee%s have been chosen for illustration purposes only and are not intended to give any indication of what the actual fee%s ought to be.

4.4.2 Limb 2 – fixed or percentage of actual costs?

There are no set rules for deciding whether to use a fixed or 'floating' limb 2 fee. There are arguments for and against each method and the owner and the NOPs should discuss their preferences as part of the commercial alignment process before entering into the alliance. It is becoming more common on infrastructure projects to adopt a mixture of the two methods, where the constructor's limb 2 fee is fixed, while the designer's limb 2 is paid as a percentage of actual costs. The implications of this arrangement, and the thinking behind it, are discussed further in Appendix 8.

4.4.3 Principles and processes – establishing limb 2 fee%s

The establishment audits will provide detailed information for each member of the preferred proponent. The audits will detail corporate overhead structures and costs, and target and actual profit margins for all relevant parts of the business. During the commercial alignment

discussions, the owner and the members of the preferred proponent companies should hold conversations seeking to understand each other's perspectives and reach alignment on limb 2 parameters (i.e. the fee%*s* and the methods for applying those percentages). This should result in a limb 2 fee that provides fair and appropriate return for each NOP for participating in the alliance. In this respect, it is recommended that the following guidelines and general principles be applied:

1. As far as practicable, the historical data should be restricted to the operating division/business unit(s) that will be participating in the alliance. Historical data should take into account three full years (if available) of past results and should include both tender data and actual outturn data. Historical data should be relied on in preference to forward forecasts and current budgets/targets.
2. Pain share/gain share relating to previous alliances should be removed from historical data (to avoid a 'ratchet' effect), unless it can be shown that this would unreasonably disadvantage the NOP.
3. Historical fee%*s* should be adjusted to reflect the particular context of the alliance. Appendix 8 sets out reasons why an owner might expect the fee% to be lower than historical trends.
4. The fee% should represent an equitable return in an alliance context for delivering outcomes in line with the pre-agreed targets, so that the NOPs should not have to rely on upside gains under limb 3 to restore them to a reasonable margin return. There are several points to consider:
 - Since the preferred proponent will have been chosen as best-in-class from a quality field, the 'neutral' points for the purposes of limb 3 (i.e. the TOC and other targets) should reflect a high performance alliance with best-in-class NOPs. The neutral point targets will be expected to match industry best practice or better.
 - Similarly if the limb 2 fee% represents a reasonable business return and the cost probability distribution incorporates a balanced assessment of risk/opportunity, there is generally no compelling reason why the TOC should be set higher than the median (P50 point) or mean as suggested in the final dot point in section 4.2.2.
5. In the first instance, fee%*s* should be developed on the basis of the company's own validated financial records. However, it is reasonable for the owner to take into account normal industry ranges and to expect that the limb 2 fee%*s* will be within the 10 to 90 percentile range of known outturn gross margins for similar work on projects of similar types/scope.

Owners need to be careful when comparing the fee%*s* between different organisations with widely different fee%*s*. For instance, in the case of consulting firms with different business and costing structures, the overall multipliers may be similar even though the fee%*s* are very different.

In all cases, the owner organisation should ensure it has sufficient information to adequately understand the financial structures of the business and satisfy itself that reimbursement under the alliance is appropriate and in line with the agreed principles.

4.4.4 Components that attract limb 2 fee%

The fee% cannot be considered in isolation. It must be considered in connection with elements within the TCE to which it will be applied. This is particularly relevant for constructors where a single uniform fee% is generally applied to all the limb 1 elements.

For this reason, the participants need to be aligned in their expectations of how major items will be procured – specifically through whose books major purchases will be processed, as this could significantly impact on fees and reported margin returns. This needs to be discussed in detail during the commercial alignment discussions. As a matter of principle, the fee% and how it is applied should reflect any differences in the mix of operations under the alliance compared to the historical mix on which the percentages taken from the establishment audits are based. This is also discussed further in Appendix 8.

4.5 Limb 3 – pain/gain

4.5.1 Overview and general principles

As noted in section 4.1.3, the pain/gain arrangements under limb 3 are intended to ensure that the NOPs assume an equitable share of the pain/gain, along with the owner, where actual outcomes are better/worse than the various targets agreed by the alliance.

The guiding principles in jointly developing limb 3 pain/gain mechanisms are:

1. Pain/gain must be linked to project outcomes that clearly add to (or detract from) value to the owner.
2. The result for all alliance participants should be either win:win or lose:lose for all alliance participants.
3. If performance by the alliance is better than pre-agreed targets, it should lead to better-than-normal returns for NOPs and vice versa, so that the return for all participants is commensurate with the actual performance of the alliance, and the only way the NOPs can achieve an outstanding return is for the alliance to deliver an outstanding project outcome.

In addition:

4. The owner should be totally committed to the NOPs maximising their returns through the operation of limb 3 gainsharing.
5. The maximum downside risk for each NOP under limb 3 should be capped at the loss of their limb 2 fee (on the basis that the fee includes any limb 2 fee earned during the project development/IPAA phase).
6. There should be no express cap on the NOP upside potential (noting that the upside potential is inherently limited in any case).
7. Pain/gain flowing to or from the NOPs is often shared among the NOPs in direct proportion to their respective limb 2 fees. However, where it is agreed that this arrangement would not properly reflect the relative contributions to/influence on the leadership, performance, outcomes and overall success of the alliance, the sharing ratios should be modified accordingly. For example, designers may argue that their contribution to performance based on their intellectual property may warrant a larger share.
8. There must be complete transparency in all limb 3 arrangements and calculations (as well as in limb 1 and limb 2).
9. The separate elements of the limb 3 arrangements should be interlinked to ensure that

there is no incentive to sacrifice performance in one area to secure reward in another.

10. Limb 3 arrangements should be clear, concise and easy to understand.

4.5.2 Principles for establishing the target outturn cost and other targets

The target outturn cost (TOC) is central to the alliance compensation model and the strategy for achieving and demonstrating value for money. It is suggested that the following guiding principles be followed when developing the TCE and determining the TOC:

1. The neutral points for the various targets underpinning limb 3 (i.e. the TOC and other targets) should meet or exceed industry best practice.
2. The TOC must be a reasonable estimate (independently reviewed) of what it should take to deliver the agreed scope of work. Appendix 9 sets out some of the factors to be taken into account in this respect.
3. As noted in sections 4.2.2 and 5.3.2 and illustrated in Figures 4.2 and 6.4, when determining the TOC from the cost probability distribution generated from the TCE, the intersection point for selecting the TOC should lie between the median (the P50 point) and the mean, unless there are compelling reasons for selecting a point outside this range. (Note that if the level of uncertainty is so great that the participants are not prepared to lock in on a TOC that lies between the median and the mean, then they may be trying to lock in on the TOC prematurely. In this case, they should undertake further investigations to reduce the level of uncertainty to within an acceptable range.)

4.5.3 Owner alliance costs

Those owner costs best managed by the alliance should be treated as owner alliance costs. Typically, this could be expected to include:

- cost of owner's staff allocated full time or part time to the alliance;
- some items of procurement (typically consultants engaged directly by owner) where the alliance will manage the procurement but the actual contracts will be directly with the owner, and
- risks/opportunities not allocated to a specific NOP.

In this way, all alliance participants become collectively responsible for managing actual costs against these budgets – not just the owner. There is also no incentive for the NOPs to exploit 'free' resources available from the owner to undertake work intended to be carried out by the NOPs.

4.5.4 Typical key result areas

For many projects the primary focus of the limb 3 pain/gain arrangements will be on managing project costs. Aside from capital cost, other key result areas (KRAs) may include:

- timely completion
- whole-of-life/maintenance costs

- performance/output of facility in operation
- areas other than cost and time (other KRAs) such as:
 - community and stakeholder management
 - traffic management
 - social responsibilities (e.g. environment, health and safety)
 - quality/workmanship
 - the legacy left as a result of the project.

In general, unless there are specific reasons to do otherwise, both overruns (i.e. AOC (actual outturn cost)-TOC) and underruns (i.e. TOC-AOC) should be shared 50:50 between the owner and the NOPs (subject to possible adjustment in the sharing percentages, based on performance in non-cost areas discussed further below).

The owner and the preferred proponent should identify the KRAs for the project and develop the overall limb 3 framework around these KRAs during the commercial discussions, before the alliance agreement is entered into. This should include agreed key performance indicators (KPIs) within each KRA. After entering into the alliance agreement, as part of the project development phase the owner and the NOPs need to develop detailed (practical and simple) procedures for how these will be measured.

Appendix 9 discusses the development of the KRA/KPI framework further, and includes a table of suggested guidelines to be used when establishing specific targets across the performance spectrum. Chapters 7 and 8 provide more detail on the key phases and tasks required for establishing and implementing an alliance.

4.5.5 Sharing pain/gain among NOPs

During the commercial discussions, the owner and each of the companies comprising the preferred proponent need to agree how any pain/gain that flows to/from NOPs under the alliance is to be shared among the NOPs. A typical approach is for pain/gain to be shared in direct proportion to the respective NOPs' limb 2 fees (the 'natural' sharing ratios). However, where it is agreed that this arrangement does not properly reflect the relative contributions to/influence on the leadership, performance, outcomes and overall success of the alliance, the sharing ratios should be revised accordingly. This is illustrated in Table 4.3, using the figures from the sample TCE.

Table 4.3: Pain/gain sharing ratios, notional \$100m project

	A	B	D	K	L	M
12	Fee\$s	Natural%	Owner	50.00%		50.00%
13	8,530,500	81.22%	NOP1 (constructor)	40.61%		35.91%
14	1,972,500	18.78%	NOP2 (designer/consultant)	9.39%	1.50	14.09%
15	10,503,000	100.00%		100.00%		100.00%

In this example:

- The fee\$s in column A are as shown in column O in Table 4.2 in section 4.4.1.
- The natural sharing ratios (based on relative proportions of limb 2 fees) within the NOPs are shown in column B.

- The natural overall sharing ratios (with the owner assuming a 50 per cent share) are shown in column K.

The NOPs' share could be increased by applying the 'uplift factor' (1.50), shown in column L, to effectively re-distribute the sharing between the designer(s) and the constructor. If it was agreed that NOP2 would receive an uplift factor of, say, 1.5, the resulting adjusted ratios are shown in column M. Here NOP2's share is uplifted, 'subsidised' by NOP1, whose share is reduced accordingly so that overall NOP share remains at 50 per cent. Any uplift factor would have to be negotiated among the NOPs. While this may appear to be a matter solely for the NOPs, it should be of concern to the owner as it affects the commercial drivers underpinning the alliance. While any such adjustment could be applied to both upside and downside, in some cases NOPs have agreed that an uplift factor is applied only to the upside, while retaining the natural sharing ratios for the downside. The owner should be involved in these discussions to understand the potential impact on drivers.

Proponents should have addressed fundamental commercial issues like this before the two-day selection workshops held as part of the establishment phase of an alliance, in the expectation that they will be discussed in overview at the workshop. During commercial discussions with the preferred proponent, final agreement is based on key principles.

4.5.6 Dealing with variations

It is expected that under the alliance agreement the participants will collectively assume all risks associated with delivering the project within the agreed scope, regardless of:

1. whether or not those risks are within the control of the participants; or
2. whether they could reasonably have been foreseen or not.

This excludes risks specifically agreed to be retained by the owner, which will be identified separately in the contract. Alliance risks are then shared between participants through the limb 3 pain/gain model. This means that situations that would be treated as variations under a traditional contract are not variations under the alliance agreement – they are just part and parcel of delivering the project. Accordingly, the TCE has to include allowances (contingencies) consistent with this all-embracing assumption of risk.

In the context of the alliance, a variation simply means a situation where the participants (via the ALT) agree that the TOC and/or other targets that affect limb 3 should be changed.⁸ Certain situations obviously need to be treated as a variation, e.g. the case where the owner wants to include significant extra scope that was not contemplated as part of the alliance works, or remove some of the scope, or changes to the fundamental design parameters/functional requirements for the project. In such cases a mechanism is needed to adjust both the TOC and non-cost targets up or down (noting that limb 1 costs are always reimbursed, whether or not a particular circumstance constitutes a variation).

It is important for the participants to secure early alignment among the ALT and AMT on the principles of what will or will not constitute a variation. Appendix 9 describes a process

⁸ Any adjustment to the TOC must incorporate adjustments as appropriate for the NOPs' limb 2 fees. In this respect: Unless agreed otherwise, the limb 2 fee adjustment is normally calculated by applying the same fee%(s) and methodologies to the limb 1 increases (or decreases) associated with the variation that were used to calculate the original fee; and where the limb 2 fee is fixed, the NOPs' fixed fee will be increased/decreased by its respective fee component within the TOC adjustment. In the case of a 'floating' limb 2, the limb 2 fee is paid as a percentage of actual costs anyway, and there is no need for a specific adjustment to the limb 2 payment entitlement.

8 Alliance implementation issues

8.1 Overview

8.1.1 Context/scope

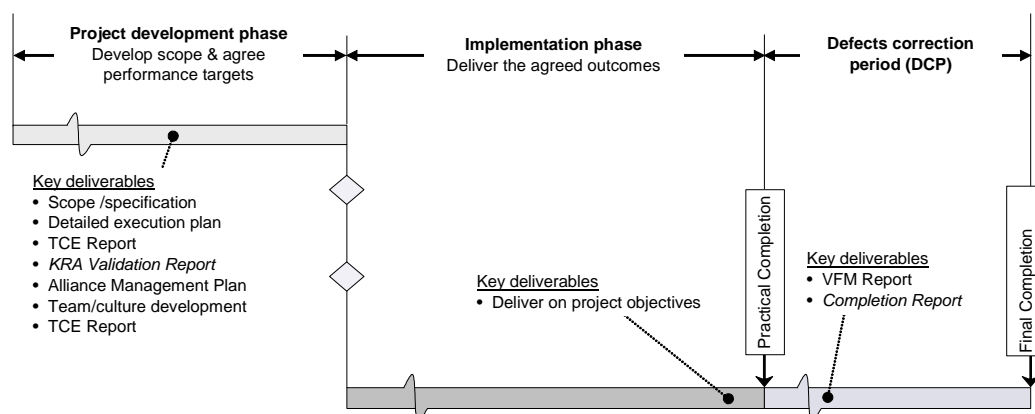
Once established, it is expected that an alliance will use best practice business and project management systems and processes through all stages of project delivery. It is beyond the scope of this Guide to address good project management practices. However, certain aspects of project development and implementation are unique to alliancing. Many of these have already been addressed in earlier chapters of the Guide. The following aspects are addressed briefly in Chapter 8:

1. overview of purpose and outcomes
2. alliance management plan
3. developing and agreeing the TCE/TOC
4. effective project governance
5. developing and sustaining alliance culture
6. closure.

8.1.2 Phases of the alliance: key deliverables

The focus of the alliance changes to suit the context of each phase, with key deliverables in each phase, as shown in Figure 8.1.

Figure 8.1: Project alliancing phases and key deliverables



The governance, leadership and management approach and systems need to be structured to match the circumstances of each phase.

8.1.3 Project development phase

During the project development phase the alliance is focused on getting the team established, defining/clarifying the scope of work and agreeing the TOC and other performance targets for the implementation phase. Some key issues need to be addressed, including:

1. Establish the project team, specifically:
 - logistics: office, administration, network systems, communication protocols, etc.;
 - people: set up organisation structure and appoint personnel, roles responsibilities and accountabilities, team culture, etc.
2. Secure all necessary approvals.
3. Define the scope of work – the process could vary considerably depending on the circumstances, for instance:
 - In some cases, the alliance may need to consider various functionality, scope and engineering options before settling on a preferred solution or option. In such cases, a first priority on beginning the alliance is to get ALT approval of the process to be used to develop options and select the preferred solution.
 - In other cases, the owner will already have settled on a preferred option and the alliance will develop the scope/design within the parameters of that option.

Regardless of the context, it is likely that the alliance will need to undertake a range of activities including risk/opportunity identification and quantification workshops, value management and optimisation studies and the usual range of design outputs including technical specifications and drawings.

4. Develop an alliance management plan incorporating the various policies and plans that will be used to guide and manage the project (see section 8.2.1).
5. Prepare the TCE and agree the TOC (see section 8.2.2).
6. Develop and agree the KRA/KPI framework, including details of all targets and measurement methods.
7. Procure all necessary insurances for the implementation phase.
8. Conduct workshops and other processes necessary to develop a high-performance alliance culture (see section 8.2.4).

8.1.4 Implementation phase

The focus throughout this phase is on meeting or exceeding the agreed project objectives. Key issues unique to alliances to be addressed during implementation include:

1. leadership, governance, management controls and reporting
2. sustaining peak performing alliance culture (see section 8.2.4).

8.1.5 Defects correction period

The alliance is responsible for attending to any defects that emerge during the defects correction period. If the project is going well, this should not involve a significant amount of work.

The defects correction period may also be used to measure various aspects of the

performance of the facility under operating conditions. These measures may be linked to the key result area/key performance indicator framework.

8.2 Specific implementation issues

8.2.1 Alliance management plan

The alliance management²³ plan should incorporate the policies and plans to be used to guide and manage the project. The plan is one of the key tools for the alliance leadership team to use to ensure there is good governance and control over the project. In this respect, the plan should:

- set out key policies, procedures and systems relating to work to be carried out by the alliance;
- specify delegated limits of financial and general authorities and specify the protocols for reviewing and changing those delegated limits;
- include detailed plans for managing all key aspects of the work; and
- where relevant, specify what aspects can be amended with approval from the Alliance Manager and what aspects can only be amended with approval from the ALT.

While the alliance management plan should incorporate normal project plans (including health and safety, environment and quality plans), certain plans are especially noteworthy in the context of an alliance, including:

1. **alliance culture/peak performance plan** (see section 8.2.4);
2. **compensation audit plan:** This sets out in detail the regime and protocols for auditing financial transactions that affect payment to/from the NOPs. It would typically include relevant auditing standards, timing and extent of audits, level of substantiation required, responsibilities and accountabilities, communications and reporting protocols, etc. The key elements of the compensation audit plan should already have been agreed during the commercial alignment discussions before entering into the alliance (see section 7.4);
3. **finance and administration plan:** It is important to set out clearly the delegations and financial authorities within the alliance;
4. **procurement plan:** This is a critical document as it provides the means by which the ALT can be satisfied that due standards of risk management, accountability and probity are being adhered to in all sub-procurement undertaken by the alliance;
5. **project reporting** (see section 8.2.3);
6. **plan for measuring performance in non-cost KRAs** (see Appendix 9).

²³ The term 'alliance management plan' is used in this Guide for convenience. The collection of project policies and procedures may be given another name or may not be assigned any particular collective name.

8.2.2 Developing and agreeing the target cost estimate and target outturn cost

Developing the target cost estimate (TCE) is one of the biggest challenges faced by an alliance. It requires the owner and the NOPs to overcome inherent conflict in their commercial interests to reach alignment on a target outturn cost (TOC). In addition they must do this in a way that builds, rather than undermines, their relationship(s) as they progress into the implementation phase. Some key issues to be addressed include:

1. The process for developing the TCE and the role of the independent estimator (IE): This is best developed/agreed at a 'TCE kick-off workshop' early on in the project development phase. The TCE kick-off workshop should be attended by:

- the leaders and key players involved in the preparing the estimate, including owner personnel who will be embedded within the estimate team;
- the IE; and
- some, preferably all, the ALT members (at least for parts of the workshop).

Typically a TCE workshop would aim to:

- clarify/confirm the roles and responsibilities of everyone involved in the process including the IE(s). Typically the TCE development process will involve three streams of effort, specifically:
 - development of the TCE itself (including risk/opportunity);
 - reconciliation with the owner's budget estimate; and
 - innovation/optimisation review, which may work in parallel with, but separate from, the main estimate group;
 - reach alignment on the objectives/constraints of the TCE process, including the desired cultural/relationship outcomes;
 - clarify how the TCE will relate to and be reconciled with the owner's budget estimate;
 - confirm acceptance of the principles for developing the TCE and agreeing the target outturn cost (see section 4.5.2);
 - agree the process for clarifying what risks/opportunities sit within/outside the scope of the alliance (e.g. variation alignment process as discussed in section 4.5.6);
 - agree on tools and processes, including software, structure, presentation and reconciliation formats, etc.;
 - agree how the alliance is to secure best price quotations from industry and how this is to be validated by the IE;
 - share information on basic costing elements and strategies;
 - agree the estimate review process;
 - agree ongoing communications and progress reporting plan/protocols; and
 - develop a detailed action plan.
- 2. Making sure there is collective ownership of the TCE/TOC:** It is important for all the key players, especially the ALT members, to commit to an outcome where they will all 'own' and defend the estimate that they align on. This can be achieved by ensuring the owner participates in a hands-on way in developing the TCE, and the ALT is appropriately involved in review and decision-making throughout the process. This commitment is best secured at the TCE workshop.

8.2.3 Effective project governance

It is critical that the alliance leadership team functions effectively throughout the project. Governance and leadership are discussed in section 6.2.3 in the legal context. Some key risks and issues of this important aspect of implementation include:

1. **Getting the right people on the ALT:** In this respect, the ALT members should:
 - have the right attributes, as set out in section 2.3.2;
 - be willing and available to perform the role of an ALT member: This could require up to one or two days a month for most of the project, with more intensive inputs for initial workshops, TCE review, etc.;
 - meet regularly and be available when required: ALT meetings will normally be scheduled well in advance to ensure that the ALT members have the time set aside. Use of alternative members is not recommended, as it can lead to lack of understanding, commitment and accountability and uneven leadership.
 - adopt a particular aspect or key objective/principle of the alliance and 'champion' it through critical stages of the project.
2. **Effective use of the alliance management plan:** It is important that the ALT does not try to micro-manage the project, but equally important that it ensures there are appropriate controls in place to make sure that the project team adopts appropriate and effective management practices. These need to comply with the policies and standards of all the alliance participants. In this respect, the alliance leadership team must ensure that all relevant policies, practices and controls – including delegated authorities – are set out to its satisfaction in the alliance management plan.
3. **Effective project reporting:** As the peak leadership body for the alliance, the ALT should in its conversations appropriately balance past, present and future aspects of the project. A significant portion of the team's time should be spent in discussing future directions and possibilities. Project reporting should be designed to support and drive this focus. In this respect the report should:
 - be designed to provide vital information in a format that can be assimilated quickly by senior personnel who typically do not have the time to sift through lots of detail; detail should be provided as supporting information;
 - provide the facts about performance to date highlighting key accomplishments and key disappointments;
 - provide past and predicted trends against the stretch/breakthrough targets, so that the team focuses on performance against various possibilities.
4. **Effective ALT meetings:** The ALT meetings should involve more than just information from the Alliance Manager about what has happened on the project. While this is important information, it should be contained in a report. All ALT members should commit to reading reports before they come to ALT meetings. Discussion of past events should then be confined to key issues, maximising the time available for the ALT to provide effective leadership and focus on future directions and possibilities.

8.2.4 Developing and sustaining the alliance culture

The alliance framework and the selection process described in Chapter 7 set the scene for developing a high-performance alliance team. The alliance framework is designed to drive organisational peak performance by:

1. aligning the commercial interests of key players who need to work very closely together – so powerful relationships can develop to achieve optimal results; and

2. by using the aligned group as the catalyst, focusing intensively on people to ensure organisational peak performance at all levels of the project (not just among those within the core alliance).

Once the alliance is established, it is the responsibility of the alliance leadership team and the alliance management team to develop and implement strategies to ensure that a peak performing project team is developed and sustained. In this respect a peak performance plan²⁴ for a project alliance should focus intensively on people issues. This overall approach might be taken:

1. Maintain an inspiring vision for the project and set out clear and challenging objectives consistent with that vision, providing a clear purpose and focus for the alliance. Renew the objectives as needed as the project progresses.
2. Ensure that all stakeholders and personnel are aligned with the project vision, support agreed project strategies and are totally committed to achieving or bettering target project outcomes.
3. Create and sustain a high-performance team environment.
4. Maintain an absolute focus on action and results.
5. Create and maintain seamless interfaces between various project teams.
6. Monitor and critically assess performance and take quick and effective corrective action when necessary.

The alliance framework set out in the Guide is designed to facilitate and acknowledge the importance of people and a peak performance culture. However, there are many different ideas and strategies on how to develop a peak performing organisation and the Guide does not prescribe any particular approach. This is a complex area requiring specialist skills in project management and human behaviour and practitioners are encouraged to seek specialist advice and facilitation suited to the particular needs and preferences of their project(s).

8.2.5 Alliance closure

In addition to the normal range of project hand-over, hand-over of documentation, demobilisation and close-out activities, the alliance will need to undertake certain other activities soon after practical completion, specifically:

1. Compile the final draft of the VFM Report and (where relevant) the executive completion report (see items 17 and 18 in the table in section 5.2.1).
2. Conduct formal self-reflection/assessments and discuss their respective alliance suitability scores (see item 19 in the table in section 5.2.1).

In addition to all the normal project completion activities, some key issues to consider for inclusion in the final reports mentioned above might include:

- overall performance of the alliance – achievements and disappointments;
- aspects done well and things that could have been done better (and how);
- culture and people;
- impacts of the project on the owner, NOPs, people involved;

²⁴ The term 'peak performance plan' is used here for convenience, referring to a plan designed to get the best out of people within the alliance organisation. In practice many different names are used to describe such a plan.

Appendix 1: Evolution of project alliancing

Background of growing dissatisfaction

All capital works projects involve inherent risks, e.g. political or economic change, climate, technology, ground conditions, engineering uncertainties, miscommunication, human error, industrial disputes, land issues, environmental issues, stakeholder management and many more.

For optimal outcomes, the owner of a project must select the most appropriate strategy for managing these risks while meeting or exceeding the project objectives.

Under traditional design, construct or combined design and construct forms of contract, risks are allocated to different parties and each party is responsible for managing their own particular risks. The contract sets out the respective obligations and rights of each party to the contract. In this respect, typically:

- The owner is obliged to provide sufficient access, information and cooperation to enable the contractor(s)²⁵ to undertake the work and to pay the contractor(s) according to the terms for carrying out the work under the contract.
- The contractor is obliged to carry out the work according to the terms of the contract.
- The contract is supposed to set out clearly what risks are carried (or not carried) by the respective parties.

While it is widely accepted that risks under these traditional forms of contract should be borne by the party best able to manage them,²⁶ in some instances contractual disputes appear to result from inappropriate allocation of risk.

Since the mid-1980s there has been growing dissatisfaction with the increasingly adversarial nature of these traditional contracting models. In the late 1980s a group representing a cross-section of government and private sector interests in the Australian construction industry²⁷ concluded that claims and disputes had become endemic in the construction industry in the developed world and that there was no indication that the incidence of claims and disputes was decreasing.

Initiatives for improvement

A number of initiatives around the world since 1990 have aimed at reducing adversarial behaviours, improving inter-party relationships and generally improving the efficiency of the building and construction industry.

²⁵ The term contractor is used in this Guide as a generic term for a company that undertakes to provide goods or a service to an owner under a contract. A contractor could include designers, specialist consultants, constructors, suppliers etc.

²⁶ NPWC/NBCC Joint Working Party, No Dispute – Strategies for improvement in the Australian building and construction industry, Fyshwick ACT, NPWC and NBCC, 1990.

²⁷ Barrell, T. et al, 'Strategies for the Reduction of Claims and Disputes in the Construction Industry', unpublished, 1988.

These include the following:

- Agencies in the US developed what they referred to as a 'partnering' – a formal management process designed to facilitate better understanding and closer collaboration between parties while still working under a traditional form of contract. The partnering process is not intended to alter the nature of the underlying contract or the fundamental rights or obligations of the parties, although some argue that the undertakings given and representations made as part of the partnering process can and do affect the legal rights and obligations of the parties.
- First published in 1993, the New Engineering Contract (NEC) in the UK is described in the NEC website²⁸ as 'a modern day family of standard contracts that truly embraces the concept of partnership and encourages employers, designers, contractors and project managers to work together through both a powerful management tool and a legal framework to facilitate all aspects of the creation of construction projects'.
- Project alliancing was first used in the UK in the early 1990s to deliver step change improvements in the delivery of complex offshore oil and gas projects.²⁹

In Australia:

- Following its launch in the early 1990s, partnering was used on many public sector civil and building projects around Australia.³⁰
- In the late 1990s the Australian Constructors Association³¹ developed and promoted the concept of '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'.
- Various states introduced guidelines and codes of practice to improve the standard of administration on government contracts and legislation, providing more protection to those at the lower end of the contracting chain.
- Project alliances were used to deliver some major oil and gas projects in Western Australia in the early 1990s.³²
- Sydney Water used a project alliance to deliver the Northside Storage Tunnel Project³³ in the late 1990s.
- Since then, project alliancing has been used by various state and local governments and by the Commonwealth to deliver a wide range of engineering infrastructure, covering road and rail transport, water supply, storage and treatment, solid and liquid waste, communications, channel and port facilities, defence material, and other sectors.
- A project alliance was used to successfully deliver the National Museum Infrastructure

²⁸ www.newengineeringcontract.com/contracts/index.asp

²⁹ Knott, T., *No Business As Usual*, London, The British Petroleum Company p.l.c., 1996.

³⁰ CIDA and Master Builders Association, *Partnering – A Strategy for Excellence*, Sydney, CIDA and Master Builders, 1993.

³¹ Australian Constructors Association, *Relationship contracting – Optimising Project Outcomes*. Available from www.constructors.com.au/pages/site_frame.htm, 1999.

³² Wandoo Alliance, Wandoo B Offshore Oil Platform, 1997. Available from Leighton Contractors or Ove Arup.

³³ Henderson, A. and Cuttler, R. (1999) Northside Storage Tunnel Project, 10th Australian Tunnelling Conference. Melbourne, March 1999.

Reference list of public sector alliances in Australian and New Zealand

The projects/programs listed below are understood to use a form of project alliancing that meets the definition set out in section 1.2. This is not intended to be a complete list of such projects/programs in the public sector, and does not include any alliances undertaken by owners in the private sector.

	Approx. start date	Project description	Location	Industry sector	Type	Approx. \$ (mil)	Owner	? x TOC
1	1997	Northside Storage Tunnel	Sydney, NSW	Wastewater infrastructure	Project	465	Sydney Water	1
2	1998	National Museum	Canberra, ACT	Building	Project	150	Commonwealth (DCITA)	1
3	1999	Norman River Bridge	Normanton, QLD	Road infrastructure	Project	5	QLD Department of Main Roads	1
4	1999	ElectraNet Capital Program	Various locations, SA	Electricity transmission	Program	4 to 25	ElectraNet	1
5	2000	Pacific Motorway Package 4	Brisbane / Gold Coast, QLD	Road infrastructure	Project	60	QLD Department of Main Roads	1
6	2000	Woodman Point WA21	Perth, WA	Wastewater infrastructure	Project	140	Water Corporation, WA	1
7	2001	ANZAC Ship Alliance	Various states	Defence Material	Program	>1,000	Commonwealth, Dept of Defence (DMO)	n/a
8	2001	Awoonga Dam Raising	Gladstone, QLD	Water supply infrastructure	Project	150	Gladstone Area Water Board	1
9	2001	Sydenham Electrification Project	Melbourne, VIC	Rail infrastructure	Project	30	Department of Infrastructure	n/a
10	2001	Port of Brisbane Motorway	Brisbane, QLD	Road infrastructure	Project	100	Queensland Motorways Limited	1
11	2001	SewerFix Alliance	Sydney, NSW	Wastewater infrastructure	Program	230	Sydney Water	n/a
12	2001	Grafton Gully <i>freeflow</i> Alliance	Auckland, NZ	Road infrastructure	Project	100	Transit NZ	1
13	2002	Priority Sewerage Program	Sydney, NSW	Wastewater infrastructure	Program	200	Sydney Water	n/a
14	2002	Inner Northern Busway section 3	Brisbane, QLD	Road /busway infrastructure	Project	35	Queensland Transport	1
15	2002	Future Port Expansion Alliance	Brisbane, QLD	Port infrastructure	Project	90	Port of Brisbane Corporation	1
16	2002	Brisbane Water Enviro Alliance	Brisbane, QLD	Wastewater infrastructure	Program	140	Water Corporation, WA	1
17	2003	North Queensland Gas Pipeline	QLD	Gas distribution	Project	140	Enertrade	1
18	2003	Wivenhoe Dam Spillway Upgrade	QLD	Water supply infrastructure	Project	70	SEQWater	1
19	2003	Burnett River Dam Alliance	QLD	Water supply infrastructure	Project	150	Burnett River Dam Authority	2
20	2003	Lawrence Hargrave Drive Alliance	NSW	Road infrastructure	Project	45	Roads & Traffic Authority (RTA)	1
21	2003	Trevallyn Upgrade Project	TAS	Hydroelectricity Generation	Project	35	Hydro Tasmania	1
22	2003	Roe Highway Stage 7	Perth, WA	Road infrastructure	Project	70	Main Roads WA	1
23	2004	Cultural Centre Busway Centre	Brisbane, QLD	Road /busway infrastructure	Project	10	Queensland Transport	1
24	2004	Tungatinah Upgrade Project	TAS	Hydroelectricity Generation	Project	35	Hydro Tasmania	1
25	2004	Northern Gateway Alliance	Auckland, NZ	Road infrastructure	Project	200	Transit NZ	1
26	2004	WWTPs Automation and Centralisation	Perth, WA	Wastewater infrastructure	Project	30	Water Corporation, WA	1
27	2004	Bunbury WWTP upgrade	Bunbury WA	Wastewater infrastructure	Project	2	Water Corporation, WA	1
28	2005	Inner Northern Busway section 1	Brisbane, QLD	Road /busway infrastructure	Project	150	Queensland Transport	1
29	2005	Tullamarine Calder Interchange	Melbourne, VIC	Road infrastructure	Project	140	VicRoads	1
30	2005	Boggo Road Bus Corridor	Brisbane, QLD	Road /busway infrastructure	Project	100	Queensland Transport	1
31	2005	Karratha to Tom Price Stage 2	Northwest WA	Road infrastructure	Project	90	Main Roads WA	1
32	2005	Tugun Bypass Alliance	Gold Coast, QLD	Road infrastructure	Project	300	QLD Department of Main Roads	2
33	2005	The New Perth Bunbury Highway	Perth, WA	Road infrastructure	Project	370	Main Roads WA	1
34	2005	Great Eastern Highway Alliance	Perth, WA	Road infrastructure	Project	30	Main Roads WA	1
35	2005	Gippsland Water Factory	East Gippsland, VIC	Wastewater infrastructure	Project	140	Gippsland Water	1
36	2005	Normanby Cycle Link Alliance	Brisbane, QLD	Road infrastructure	Project	6	Queensland Transport	1

Appendix 2: Program alliances

Context

There may be situations where it makes sense for an owner to bundle a number of projects that could be delivered as separate projects into a single 'program alliance'. Typical situations might include:

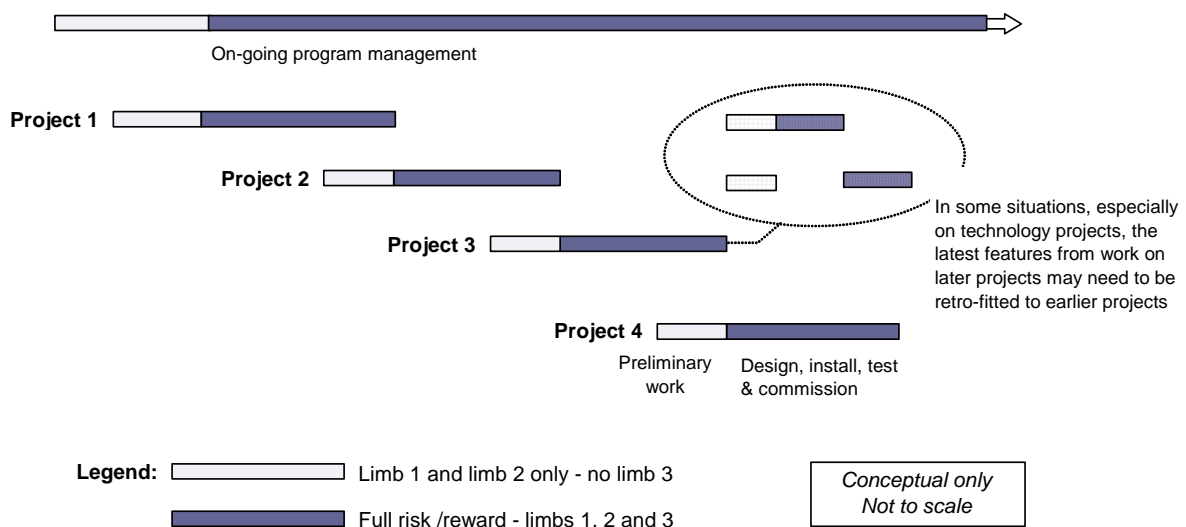
- A series of smaller projects, each of similar scope, where resources can be better managed using a program-wide strategic approach and where some performance criteria can only be assessed on a program-wide basis, for example, Sydney Water's SewerFix Program.
- The individual projects themselves are not directly linked, but grouping the projects together is more attractive for service providers and results in better control over timing and resource allocation, for example, ElectraNet's 1999-2003 capital works program.

In some cases, such as Sydney Water's SewerFix Alliance, the individual projects within the program may be small and relatively straightforward, but the large volume of projects presents a major challenge and an opportunity for the alliance to optimise resources and outcomes through effective program-wide planning and management.

Some distinguishing features of program alliances

While most of the principles and processes set out in the main text of this Guide can apply to program alliances, certain features of a program alliance need special consideration. Figure A2.1 illustrates a simple situation where four separate projects are delivered in sequence (noting that the situation will generally be a lot more complex than this in practice).

Figure A2.1: Program alliances involving multiple projects, sample delivery sequence



Under this arrangement, the owner would still undertake a process to arrive at an informed decision to use an alliance (as suggested in Chapter 3), select a preferred proponent and enter into the alliance agreement using the selection/development processes outlined in Chapter 7. Once the alliance agreement is executed, the key features that distinguish the program alliance from a single project alliance would include:

1. In the early stages of the alliance the owner and the NOPs would need to develop and reach agreement on the following items:
 - scope of the program
 - how the overall program will be managed (as distinct from the individual projects)
 - scope of project 1
 - TOC and other specific performance targets for project 1
 - budget target for program management, across the whole program, or for the first year/period of the program
 - KPIs within the various key result areas across the whole program. These are likely to be linked to the owner's strategic objectives for the program.
2. The owner and the NOPs would subsequently develop/agree the scope, the TOC and other performance targets for the other projects, and where applicable, budgets for program management during subsequent periods.
3. Given that the alliance agreement needs to provide for recurring development/agreement on the TOC and other performance targets, there is less benefit in having a separate IPAA for a program alliance.

Table A2.1 summarises some of the key issues and questions that might typically need to be considered in program alliances.

Table A2.1: Program alliance questions to consider

Alliance program area	Questions to consider
Compensation model	<p>Guiding principles for how information/knowledge gained in the course of completing one project is used when developing the scope, TOC and other performance targets for subsequent projects? For instance:</p> <ul style="list-style-type: none"> - If actual productivities for a particular activity on Project 1 were 10% better than the best practice levels allowed for in the TCE for Project 1, would the estimate for those items within the TCE for Project 2 be set at 10% better than for Project 1? - What if the performance on Project 1 was 10% worse than the best practice levels allowed within the Project 1 TCE? <p>Should there be incentives for continuous improvements across the program?</p> <p>Should the limb 2 fee%(s) be held firm for the duration of the program? If not, what are the protocols for review/resetting?</p> <p>Is the NOPs' downside risk under limb 3 applied on each project, or across the entire program? (Having the risk cap applied across the overall program means that the NOPs could lose a lot more than their limb 2 fee on a particular project, providing a much greater potential risk exposure for the NOPs.)</p>

Alliance program area	Questions to consider
Legal issues	<p>What happens if the owner and the NOPs are unable to reach alignment on the scope, TOC or other performance targets for a subsequent project?</p> <p>Can the owner terminate a particular project without terminating the overall program?</p> <p>If the owner terminates the overall program, what is the impact on projects already underway? Can these continue to completion?</p>
People/team	<p>How will the participants maintain a high-performance team across different projects and possibly over a long period of time? In this respect, some of the key issues to be considered will typically include:</p> <ul style="list-style-type: none">- succession planning for key staff- changes in composition of the ALT and AMT- renewing challenges for the alliance so that the purpose of the alliance remains fresh and worthwhile in the minds of alliance team members.

Table A8.1: Factors in setting fee%*s* in project alliances

Factor	Elements
Risk/opportunity profile	<ul style="list-style-type: none"> • The overall risk for the NOPs is capped (limited to the loss of the limb 2 fee, with reimbursement of limb 1 assured). This is downside protection that is generally not provided, especially for constructors, under non-alliance forms of contract. • Greater opportunity for innovation • Greater control over own destiny; because of the requirement for unanimous decisions at ALT level, cannot have solution imposed. • No residual risk for defects beyond final completion
Joint development of the TCE	The TCE is developed on the principle that the TOC represents a genuine pre-estimate of the most likely outturn cost for the project, based on a rigorous joint analysis and shared understanding of all aspects of the estimate, including provisions for risks and opportunities. The fee% should reflect this.
Lower bid cost	The cost of winning the work may be significantly lower than for traditional contracts, at least in the case of constructors.
Strategic benefits	The NOPs stand to secure considerable strategic benefits from their participation in the alliance – including enhanced relationships and reputation, accelerated development of leadership and management capabilities and much greater staff satisfaction. It is not unreasonable to recognise this at a corporate level and perhaps take it into account when establishing the fee% <i>s</i> .
Better spread of corporate overheads	In some cases, the introduction of the alliance work into the business unit can significantly increase the turnover of the business, without incurring an equivalent increase in the corporate overheads of the business. This should result in a reduced corporate overhead percentage, as the overheads can be spread over a larger base.

On the other hand, other factors may tend to increase the fee% compared to historical trends; for instance:

- Senior people will be required to provide support as ALT members at no direct charge to the project, on the assumption that those costs are recovered in the corporate overheads. Alliance contracts tend to take up a disproportionate amount of senior management time.
- The cost of winning the work may be higher than for traditional contracts, at least for consultants.

References and further reading

Australian Constructors Association (1999) *Relationship contracting – Optimising Project Outcomes*. Available from www.constructors.com.au/pages/site_frame.htm.

Barrell, T. et al (1988) 'Strategies for the Reduction of Claims and Disputes in the Construction Industry', unpublished'.

Box, R. (April-May 2002) 'Why Project Alliances need new Insurance Products', *ANZIIF Journal*.

Chew, A and Hayford, O, (Nov/Dec 2004) 'Ensuring your alliance contract is legally sound', *Australian Construction Law Newsletter*.

CIDA and Master Builders Association (1993) *Partnering – A Strategy for Excellence*. Sydney, CIDA and Master Builders.

CSERGE (Centre for Social and Economic Research on the Global Environment). *First Impressions Count – Almost Double*, CSERGE Working Paper, EDM 03-16.

Department of Treasury and Finance, Victoria, Gate 3 Guidelines (May 2005) *Gateway Project Lifecycle Guidelines - the Procurement Strategy Decision*. draft.

Gallagher J, 'Default and Termination in Alliance Agreements', Commercial and Legal Framework Alliance Contracting Conference, Sydney, 28 April 2005.

Henderson, A. and Cuttler, R. (1999) *Northside Storage Tunnel Project*, 10th Australian Tunnelling Conference. Melbourne March 1999.

Hutchinson A. (2004) Target Outturn Cost: Demonstrating and Ensuring Value for Money. Revised November 2004, www.alchimie.com.au.

Hutchinson A. and Gallagher J. (2003) 'Project Alliancing An Overview'. Conference presentation, Christchurch, New Zealand, March 2003. www.alchimie.com.au.

Kiers, D. (2001) *Alliance competence: Key capabilities for success*. APPEA Journal 2001, pp. 811-822.

Knott, T. (1996) *No Business As Usual*. London, The British Petroleum Company p.l.c.

NPWC/NBCC Joint Working Party (1990) *No Dispute – Strategies for improvement in the Australian building and construction industry*. Fyshwick ACT, NPWC and NBCC.

Port of Brisbane Motorway Alliance (2003) *Alliance Learning Experience – Executive Summary*. Report compiled by Evans & Peck commissioned by the ALT. Available via the Alliancing Association Australasia (formerly the Alliance Industry Association).

Ross, J. (2003) *Introduction to Project Alliancing*. Presented at Alliance Contracting Conference Sydney. October 2003. Available from www.pci-aus.com.

Seddon N (1999) *Government Contracts*, Federation Press, Leichardt, NSW.

Transit New Zealand (2005) *Final Report – GGP Alliance, Value for Money*, June 2005. Available on request from Transit New Zealand.

Walker, D., Hampson, K. & Peters, R. (2002), *Relationship-based procurement strategies for the 21st century*, AusInfo, Canberra.

Wandoo Alliance (1997) *Wandoo B Offshore Oil Platform*. Available from Leighton Contractors or Ove Arup.