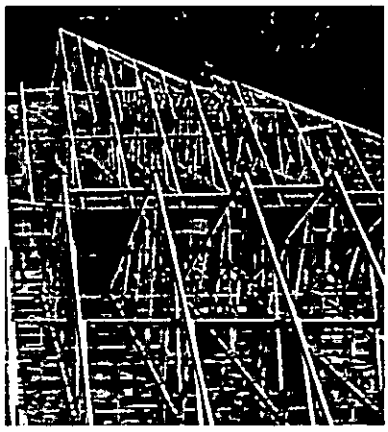
Project Alliancing - Creating the Possibilities



A Project Alliance, writes JOHN GALLAGHER, is a project delivery strategy in the same way that project management or design and construct contracting are a form of project delivery strategies.

A Project Alliance goes beyond simply 'transferring' the greatest proportion of a project's risks for the lowest price.

However, a Project Alliance needs to be distinguished from other forms of relational or relationship contracting including partnering, strategic alliances, teaming, outsourcing or management contracts. To do so some commentators refer to "pure" Project Alliances.

A "pure" Project Alliance can be defined as: "*an integrated high performance team, sharing all project risks, selected on a best for project basis, incentivised to achieve outstanding performance in pre-aligned project objectives with uncompromising commitments to trust, collaboration, innovation and mutual support in order to achieve breakthrough results.*"

The unique feature of a Project Alliance is the synergy created between the selection of the preferred participants, the core alliance principles, the commercial framework and the structure of the Project Alliance which drive the pursuit and delivery of outstanding results.

In short:

- Participants are selected on capability. Price is not part of the selection process;
- The participants intentionally seek alignment of sponsor's and contractor's objectives;
- All project risks are shared with all participants jointly responsible to deliver all aspects of the project;
- There is a single integrated high performance project team selected on a 'best for project' basis;
- There is no fault, no blame and no dispute amongst participants;
- All decisions are made unanimously;

John Gallagher, Phillips Fox Lawyers, specialises in project documentation, project alliancing, risk allocation and management (particularly in the interaction of infrastructure delivery and financing documentation) and construction advice. This is an edited transcript of the paper that was presented at ICEC 2002.

The author recognises the paper prepared by Andrew Hutchison, Managing Associate, JMJ Associates (Alliance Facilitators on most of the major public sector Alliances in Australia), entitled "Creating Successful Collaboration - Select the Right

- A commercial framework is created that drives 'best for project" decisions that are consistent with, and create an environment of outstanding performance in, project objectives delivering outstanding rewards to all participants.

When to use a Project Alliance

The choice of any given procurement approach to deliver a project should only be made after a detailed and carefully considered risk analysis which considers all of the objectives, opportunities and risks involved in successfully delivering the project.

Project Alliancing is best suited to those projects where the traditional 'risk transfer' strategy is not appropriate.

In many projects outcomes can be enhanced, and the project optimised, by 'embracing' project risk through collaborative and co-operative contracting against the traditional 'blind faith' transfer or shifting of risks to others.

Project Alliances have been used in Australia to deliver a large number of projects and programs, in a diverse range of industries including:

- *Oil and Gas* - Wandoo B oil Platform, East Spar Project
- *Engineering* - BHP Hot Briquette Iron Plant
- *Transport* - Pacific Motorway Package #3, Port of Brisbane Motorway, Sydenham Rail Electrification Project,
- *Water* - Northside Storage Tunnel, Woodman Point Wastewater Treatment Plant, Awoonga Dam, Sydney Water Pump Station Upgrade Program
- *Construction* - Acton Peninsula Alliance - National Museum of Australia
- *Defence* - Project Djimindi, ANZAC Ship Alliance

Although it is not possible to list here all of the projects or 'types' of projects that may be suitable for Project Alliancing, Project Alliancing is suited to projects involving:

- Elements of the 'unknown', particularly in terms of the technology, processes and methodologies to achieve defined objectives;
- A high degree of complexity, either in design, construction, technology or development, that cannot be satisfactorily or sufficiently scoped or specified at the commencement of the project;
- A project where radical or rapidly developing or expanding technology may influence time, cost or capability objectives;
- Overtly optimistic, if not impossible, timeframes which require flexibility in innovation and approach as external influences, including economic, political or stakeholder considerations, dictate timeframes that do not permit the project to be sufficiently scoped or specified prior to the commencement of the project;
- A desire to efficiently engineer value by performing build ability, construct ability and operational studies into the very earliest possible stages of the definition, design, development or documentation. To this extent it is well recognised that up to 65% of the cost of the project is determined during the definition and initiation phases of a project where less than 5% of the project cost is expended;
- The necessity for innovation and step-change developments in design, technologies and construction methodologies to reduce the capital cost of a project to enable a product, commodity or service to be delivered at an economical cost, or simply, within budget, to enable a project to be viable;
- Where stakeholder or external project interests or influences have the capacity, if left unattended, to broadly impact the project objectives, but where concentrated and focused in a co-operative team lead to breakthrough outcomes;
- Where the experience and expertise needed to deliver a project are spread either throughout a sponsor's or participant's organisations, or across the world, and there is a need to harness that expertise into one team throughout the project.

A Project Alliance will deliver the flexibility to allow conflicting objectives to be closely aligned in a commercial framework to produce optimal project outcomes.

Selecting PA Participants

Many project sponsors will argue that they have developed strategies and contractual relationships which seek to align their, and their contractor's, objectives.

Unfortunately, many of the "selection", "tender" or "expression" processes utilised by sponsors to identify participants for these strategies and contractual relationships restrict or constrain the sponsor in identifying and selecting the "best" or "best fit" team participants.

A successful Project Alliance relationship requires a combination of:

- Clearly defined objectives;
- A well integrated team;
- A well developed project management skills;
- A solid commercial framework; and
- An uncompromising commitment to the aligned alliance principles.

However, in our experience the most fundamental success factor is the selection of the right participants.

The aim of any Project Alliance selection process should be:

- The selection of the right alliance participants to give the combined team the greatest opportunity to meet and exceed the project objectives; and
- To create momentum in the project as a major step in building and nurturing a strong single

culture and leadership team.

The selection process must be rigorous and valid. The principles of any selection process must include:

- Rigorous evaluation of the proposed project teams and individuals to establish an
- Aligned view amongst the project sponsor's selection team on the proponent which is the best team for the project;
- Conducting contractual and commercial conversations consistent with building long term relationships and not 'business as usual negotiations';
- Building momentum on the project during the selection process so that when the alliance agreement is agreed, the project team is excited about, and aligned on, the project objectives and can immediately start on delivering the project;
- Satisfying the highest standards of probity and public scrutiny;
- Arriving at a commercial outcome which satisfies and is regarded as a win for all parties and the best value for money; and
- Maintaining competition throughout while not being restricted to a selection based upon the lowest price.

Principles and Features

Principles - The alliance participants, initially as part of the selection process, then finally at the risk/reward workshop, discuss, create and align upon the core alliance principles that will assist them to deliver the aligned project objectives.

These principles will be daily applied, and reapplied, to evaluate and validate each decision taken by the alliance participants in delivering the project.

Whilst the core alliance principles are unique to each Alliance, there appears to be, from my experience, a consistent commitment to:

- Equity - reward being commensurate with performance with no win/lose outcomes;
- Best for project - no compromise in either decision making, or the alliance participant's dealings with each other;
- Integration - one high performance team with one culture;
- Open honest communication;
- Collective responsibility and accountability for all project outcomes;
- Trust, integrity and respect;
- Continually striving for innovation to achieve breakthrough results through stretch targets; and
- Mutual support in an environment of no fault - no blame with no dispute.

Features - It is the alignment on, and commitment to, these principles that influence and create the behaviours of the participants and their relationships with each other, to the project and its risks. In addition, they shape the features and structure of the Project Alliance and subsequently the Alliance Agreement.

The features that characterise a pure Project Alliance are:

- All project delivery and performance obligations are collective. The Alliance Participants collectively enjoy all of the benefits and burdens involved in all of the risks in delivering the project.
- There is a single fully integrated high performance team with each position in the team selected on a best for project basis regardless of individual corporate identity. The team is structured to incorporate:
  1. Alliance Leadership Team ('ALT') to provide leadership and guidance and support to the alliance project management team. Each Alliance Participant has equal participation on the ALT through a senior representative who has little day to day involvement in the project regardless of their corporate identity or role.
  2. The Alliance Management Team ('AMT'), led by the Project Manager, or Project Director to manage the day to day issues involved in delivering the project.
- Unanimous decision-making - every decision of the ALT is unanimous. If one of the Alliance Participants cannot support a decision or solution, that decision or solution cannot be accepted by the ALT and another solution must be found.
- No fault, no blame, no dispute - the Alliance Agreement clearly incorporates the Alliance Participant's commitment to an environment of no fault, no blame and no dispute. The Alliance Agreement does not provide for any dispute resolution mechanism with all disputes or differences of opinion being unanimously aligned upon by the ALT.
- The commercial framework of direct costs, corporate overhead, normal profit and gainshare is consistent with and supports the alliance principles and is intentionally structured to incentives the Alliance Participants to pursue and achieve breakthrough results and prevent any possibility of a win/lose result.

Transparency and an audited open book approach to the processes of the Alliance, including all elements of the commercial structure.

"In a Project Alliance, the Participants are driven to achieve outstanding profits by delivering outstanding performance."

Risk - Transfer or Embrace

The delivery of any project involves risk and uncertainty. At the definition stage of a project these risks and uncertainties are "owned", and must be managed by, the sponsor.

The success of a project will be dictated by the success, or otherwise, of the management of these risks throughout the project.

In many projects, insufficient resources are devoted at the early stages of a project to first identify and then define the most appropriate mitigation or management of these risks to ensure the successful delivery of a project.

Often a project sponsor will select a delivery method or contractual framework and then seek to fit a project's risk profile into that framework.

Take this recent statement from a project sponsor as an example: "*The task is to review the approach to ensure that we have selected the most appropriate project delivery model (currently AS43004 modified) and identify themost appropriate risk allocation issues to offer possible solutions.*"

Not only does this example blur the concepts of project delivery and contractual terms but also the selection of both had been done before any risk identification or modelling had been carried out. It is only after a thorough analysis is carried out to identify the risks inherent in a project and how they can best be managed and mitigated should the selection of a preferred delivery model be undertaken.

Risk transfer - Traditionally, the strategy that has been adopted by many sponsors to "manage" project risk has been to transfer or shunt much of the responsibility for project risk to other parties, either contractors and/ or designers. In an attempt to define this risk shunting approach many sponsors respond that: "*a party to a contract should accept those risks where the occurrence, or impact of that occurrence of that risk is within the party's control.*"

Whilst the philosophy or theory underpinning this approach may be sound its application is often inappropriate. At times sponsors to transfer risks that are beyond another party's control often within a strict inflexible legal or commercial structure use this approach.

The effect of this combination is typically high levels of claimsmanship and disputation as one party, or another, perceives it is in their own commercial best interest to allow a risk or uncertainty to run its course rather than manage it proactively.

Risk embrace - An alternative to this risk shunting approach is the "risk embrace" approach

best typified by the Project Alliance. In this approach the participants embrace all project risks.

They proactively manage, are responsible for and share all the benefits and burdens of these risks. By embracing all project risks within the Project Alliance the participants provide themselves with a flexibility to manage, minimise or remove a risk on a "best for project" basis consistent with all Alliance principles.

All aspects of the Project Alliance accommodate and cultivate the flexibility allowing for proactive management of these risks.

- The aligned project objectives and commitments to the Alliance principles provide a "best for project" context to guide the management of risks as they arise.
- The principles of No-fault, No-blame, No-dispute and unanimous decision making, together with trust, integrity and honest communication in an environment of mutual support removes any need to lay blame.
- The commercial framework, incorporating predetermined outcomes in the event of the occurrence of a risk removes any need for individuals within the Alliance to identify how the occurrence of a risk may impact their own participant organisation.

Whilst the individual components of these characteristics may be present in other delivery systems, their interaction is unique to Project Alliancing.

"The use of the phrase 'Normal' is used to identify the level of profit the Alliance Participants will receive ."

The Commercial Framework

The key principle underpinning Project Alliancing is the equitable sharing of risk and rewards amongst all Alliance Participants. The commercial framework must drive best for project behaviours to achieve outstanding performance.

If this framework is ill conceived, inappropriate, too complex or simply does not incentives the Participants to seek outstanding performance then ultimately, the Alliance may be an Alliance in name only.

The commercial framework of a Project Alliance typically consists of:

- Direct Costs
- Corporate Overhead
- Normal Profit and
- Gainshare.

Direct Costs - The Project sponsor agrees with the Alliance Participants that no matter what events or circumstances or degree of difficulty are encountered in completing the Works to be performed by the Project Alliance, the Alliance Participants will be paid all direct costs on the principles that:

- All costs fairly attributable to, or incurred, in completing the Works to be performed by the Alliance shall be direct costs; and
- No Alliance Participant shall derive any unreasonable profit or advantage from the utilisation of their resources in completing the Works to be performed by the Alliance;
- To the extent possible - be cash neutral;
- All direct costs are transparent and fully audited.

Corporate Overhead - Corporate overhead is aligned upon as part of the risk/reward workshop. The process for the alignment on corporate overhead is not a 'negotiation'; it is a step in building the Alliance and must be consistent with the broader principles underpinning the Alliance.

It is the role of the Probity Adviser to audit and validate the corporate overhead rate aligned upon by the Participants to ensure that it is the 'right' rate.

In the event that the Alliance Participants cannot support the aligned upon corporate overhead rate after receiving the Probity Adviser's report, the ALT will then need to again align upon a corporate overhead that all Alliance Participants can support.

Normal Profit - The guiding principle for aligning on normal profit is that if the Alliance Participants fail to achieve outstanding performance, i.e., completing the Project for the aligned "target outturn cost" and achieving only "business as usual" performance in the aligned Project Objectives the sponsor will be "disappointed".

In keeping with this principle, in this situation, the Alliance Participants should receive a profit, which is less than an optimum profit that they may achieve in an open market by a traditional procurement strategy.

The use of the phrase 'Normal' is used to identify the level of profit the Alliance Participants will receive if "all" that is achieved is business as usual performance.

Accordingly, it is characterised as 'Normal' by reference to the Alliance Participant's ability to achieve outstanding performance. It is the Normal Profit for the preferred proponents that the project sponsor has selected. In this respect, it is important to note:

- The preferred proponents have been specifically selected as they are 'best in class' and not for any other reason;
- It is to be expected that those organisations that are best in class may earn profits that are greater

Project	'Business as Usual' Estimate	Sanction Cost	Final Actual Cost
Refinery Revamp	Not Known	US$295m	US$269
Offshore Oil Platform	£450m	£373m	£290m
Offshore Oil Platform	£900m	£900m	£700m
Polyethylene Plant	US$175m	US$149m	US$133m
Offshore Pipeline	£348m	£319m	£242m
Gas Terminal	£123m	£119m	£92m

Some International Project Alliance Outcomes

than a perceived industry mean or median; and

- If the sponsor wants best in class performance it should be committed to paying best in class profit.

If the project sponsors cannot support paying best in class profit, together with creating an opportunity to earn outstanding profits through outstanding performance, their approach to Project Alliancing is inconsistent.

Gainshare - It is the gainshare regime - supported by direct costs, corporate overhead and normal profit that provide the key commercial drivers for outstanding performance.

- Gainshare should be linked to the objectives that 'add value' either objectively or subjectively to the Project and/or the project sponsor. At the risk/reward workshop the alliance participants will align on the Project Objectives elements of which will then be incorporated into the gainshare regime.
- Gainshare outcomes should be either win/win or lose/lose, there should be no opportunity for a win/lose outcome.
- The individual elements of the gainshare regime should be linked to provide no incentive to sacrifice performance in one objective to secure reward in another; and
- The gainshare regime should be clear, concise and easy to understand and apply, but not easy.
- There should be complete transparency in all gainshare arrangements.

Typically, gainshare regimes involve objective (e. g. time and cost) and subjective performance objectives. There is essentially no limit on the type of subjective performance objectives that can be developed. Examples have included design integrity, quality, environment, community, stakeholder relations, indigenous employment, safety, Australian Industry Involvement, operator acceptance, media and public relations.

They can also include maximising capability, technology deployment on development but broadly are only limited by the participant's imagination and the structures necessary to accurately and efficiently capture the value created.

The Target Out-turn Cost

The Alliance Agreement does not contain a contract sum. In a traditional contract there is only one certainty regarding the contract sum: it is simply the starting point for the contract and generally has no connection with the final cost to the sponsor of delivering the project, the 'out-turn cost'.

In a traditional contract a contractor's only way to maximise its profits is to drive its own costs down, typically through quality or scope reduction, while driving its revenues and therefore the sponsor's costs up.

In a Project Alliance, the Participants are driven to achieve outstanding profits by delivering outstanding performance in terms of the aligned project objectives, only one of which is cost.

The Alliance Participants are not motivated to increase project costs, as this will decrease, not increase, their profit outcomes. Immediately after the risk/reward regime is aligned upon, the Alliance Participants begin to collate the information

necessary to calculate the total costs of delivering the project.

This process is aimed at calculating, to the highest degree of accuracy possible, given the level of completeness of documentation available, a target, typically referred to as either a Project Target Cost or a Target Out-turn Cost ('TOC') which is then used as the origin point from which the participants gainshare/painshare regime will operate.

All Alliance Participants are involved in calculating the TOC, but it is essential for probity and validity to have the TOC independently validated. It is important that the TOC, and the process used to develop the TOC, can withstand external scrutiny and examination.

The intention of the TOC is to calculate and capture all of the costs that will be incurred by the Alliance Participants in delivering the project. It is not a tender figure nor is it a contract sum.

It is an estimate of what it will cost the Participants to deliver the project to completion, including the cost of meeting the inherent project risks, some of which will inevitability occur. The TOC will include:

- The direct costs of:
- All preliminaries for the project for all Alliance Participants;
- All trade, subcontractor and supplier costs to provide all plant, labour, materials and equipment to complete the project; and
- All consultants who are not Alliance Participants;
- All Alliance Participants' overheads and normal profit;
- Appropriate contingencies to meet project risks. The identity and size of contingency items in the TOC generate lively debate but:
  1. Contingencies are needed to deal with known and unknown risks that will, or may, occur but which may not be competitively insured;
  2. The contingencies must be valid and defensible; and
  3. All Alliance Participants will participate in calculating the TOC and unanimously aligning upon all contingency items. There is no opportunity for one Participant to unilaterally inflate or include an unnecessary contingency or unnecessarily spend a contingency.

The TOC does not typically include an item for gainshare, as this must be earned by outstanding performance and is not a cost to deliver the project. However, the issue of the funding of gainshare funds, particularly gainshare not linked to costs or revenues need to be carefully considered to ensure a meaningful gainshare regime is created.

Outcomes

The attraction of any delivery strategy is the outcomes it generates. Set out within this article is a schedule of the outcomes on the majority of pure project alliances in Australia available to the author. In addition details of a number of pure project alliances developed by BP in Europe and the Americas have been provided.

What these schedules demonstrate is that Project Alliances:

- Typically enjoy significant capital cost savings, not only against sanctioned costs, but also against stretch target and target outturn costs;
- Are predominantly delivered before the schedule, and often stretch, target dates;
- Report outstanding safety and/or lost time through injury statistics beyond industry benchmarks;
- Have exemplary industrial relations records;
- Score industry "best practice" levels of performance in terms of quality, design, environmental and community stakeholder issues; and
- Regularly receive national and international industry awards for their performance.

Whilst the outcomes are apparent, the reasons for their achievement are not.

During my presentation at the ICEC Third World Congress, I reviewed the outcomes on three Project Alliances identifying the key factors and distinguishing features that have delivered outstanding performance on these Projects.

Additional reference and guidance material

1 The Commonwealth Auditor-General Audit Report No 34 1999/2000 Performance Audit, *'Construction of the National Museum of Australia and Australian Institute of Aboriginal & Torres Straight Islander Studies, Australian National Audit Office'*.

2 *Contract Management Better Practice Guide*, February 2001, Australian National Audit Office.

3 *Project Alliances in the Construction Industry*, New South Wales Department of Public Works & Services, 8 September 1998.

4 *No Business As Usual - An Extraordinary North Sea Result*, Terry Knot, The British Petroleum Company plc, 1996, Botanic House London, ISBN 0 86165 2029.

5 *Relationship-Based Procurement Strategies for the 21st Century*, Professor Derek H T Walker (RMIT University Melbourne), Keith Hampton and Renaye Peters (Queensland University of Technology, Brisbane)

Some Australian Project Alliance Outcomes

Year(s)	Project Alliance /Sponsor	Participants	Comments
'94 -'96	**Wandoo B oil platform** WA - $377 million Ampolex (Mobil)	Leighton Contractors Dawson Brown & Root JV Keppel Corporation Ove Arup Pty Limited	Winner of 1997 engineering excellence award Winner of 1998 Australian Construction Award $13m < budget, 26.5 mths vs. norm of 34 mths
'94 - '97	**East Spar Project** WA (oil & gas) WMC Resources Ltd	Kvaerner Oil & Gas Clough Engineering	Winner of the IEAust's highest national engineering excellence award - the Sir William Hudson Award
'96 - '99	**Hot Briquetted Iron (HBI)** WA (iron ore) BHP	Various	3 separate fabrication / construction alliances.
'97 - '00	**Northside Storage Tunnel Project** NSW - $450m Sydney Water	Transfield Tunneling Connell Wagner Montgomery Watson Kilpatrick Green (suballiance)	Completed on time despite ~ 9 month delay on critical work arising from external forces. 5.8% cost overrun versus agreed target. Scored at 'outstanding' (but suffered one fatal accident) Environ. Measured as Best Practice Comm. Measured as Best Practice
'98	**National Museum Acton Peninsula** ACT - Building Commonwealth Government	Ashton Raggatt McDougall, Robert Peck von Hartel Trethowan, Bovis Lend Lease, Tyco International, Honeywell Ltd, Anway and Company	C completed 9 March 2001 - 3 days early Cost 1.5% above TOC but within appropriation Industrial No time lost for industrial action Quality and Design Integrity rated as "very high quality" and "remarkable" Winner of various Architectural, Project Management, engineering and electrical contracting awards for 2001.
'99	**Woodman Point Wastewater Treatment Plant Amplification** WA ~$120m WA Water Corp	Clough Engineering Kinhill Group	Scheduled for completion by end of March 2002
'98 - '00	**Clean Fuels Project** Qld - $450m (oil & gas) BP / BOC / Lend Lease / Origin Energy / ATCO Power Aust	Stork ICM Kvaerner Processing Australia Fluor Daniel Canada JMW Consultants	Project completed in late 2000 - very successful in all respects. Winner of the ACA 2001 Construction Achievement Award Time finished on 18 October 2000 compared to sanctioned target of 1 January 2001 - 2.5 months early Actual cost = sanctioned / target cost (which was $80m original budget) Safety LTIFR = 1.39; MTIFR = 7.76; AIFR= 9.07. Outcomes much better than industry averages Quality Exceeded world class benchmarks Environ. 0 incidents IR 0 incidents; 0 lost time
'98 - '99	**Penola West project** SA - $4m (electricity transmission) ETSA - ElectraNet SA	Kilpatrick Green Burns and Rose Worley	Completed October 1999 well ahead of schedule despite numerous externally imposed delays. Finished on 15 October 1999 compared to target of 31 October1999 - 2 weeks early Cost On budget Safety LTIFR = 0; MTIFR = 0 (20,000 hrs) Env./Com. Score of 7 out of 10
'99 - '00	**Pelican Point Project** SA ~ $22m (electricity transmission) ETSA - ElectraNet SA	Kilpatrick Green Burns and Roe Worley	Outstanding outcomes all round:- Time Finished on 14 June 2000 compared to stretch target of 1 July 2000 - 2 weeks early but months ahead of world best practice Cost 10% underrun Safety 1 minor LTI Quality Score 9 out of 10 Env./Com. 10 out of 10
'99 - '99	**Norman River Bridge ~$5m** QLD Department of Main Roads	Barclay Mowlen Construction	Completion on 22 November 1999 - weeks earlier than the already tight target date prior to the 99-00 wet season, on budget and with outstanding support from the community
'00 - '00	**Pacific Motorway Package #3** QLD ~$60m (road infrastructure) QLD Department of Main Roads	Thiess Contractors SMEC Australia	Converted balance of 'distressed' traditional schedule of rates contract to alliance in a bid to reach Practical Completion by October 2000 - 3 months earlier than the previously forecast trend. Time Finished on 2 October 2000 – 5 days earlier than scheduled opening day despite many setbacks along the way (many months earlier than previous trend) Cost ~5% underrun