

In Pursuit Of Additional Value

**A benchmarking study into alliancing
in the Australian Public Sector**

<An Overview>

Version control

A version of this presentation was first presented on the 22nd October 2009 to the *AAAlliancing 2009 National Convention*.

This version is based on the final report of the Benchmarking Study that was completed on the 30th October 2009. The material changes are in reporting the key findings of the Study.

Structure of presentation

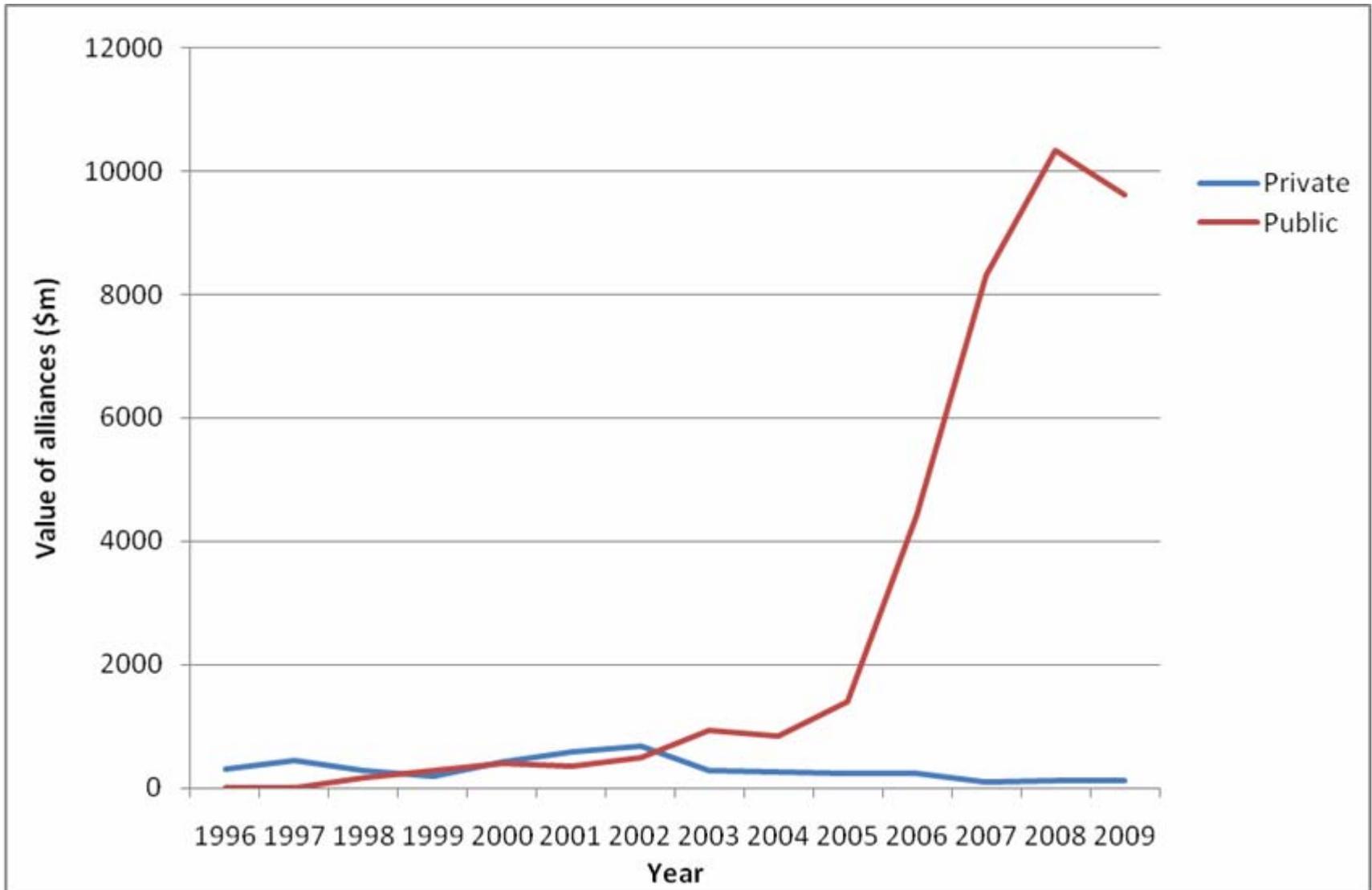
1. Introduction & Overview (NT)
2. Structure of the research methodology (CD)
3. Study Findings (PW)
4. Our top 3 take-aways
 1. Nick Tamburro
 2. Colin Duffield
 3. Peter Wood
5. Wrap up (NT)

Overview and Introduction

▶ *the drivers behind the study*

Nick Tamburro
Director, Commercial Division
Department of Treasury and Finance
Victoria

The use of alliancing in public and private sectors



Acknowledgements

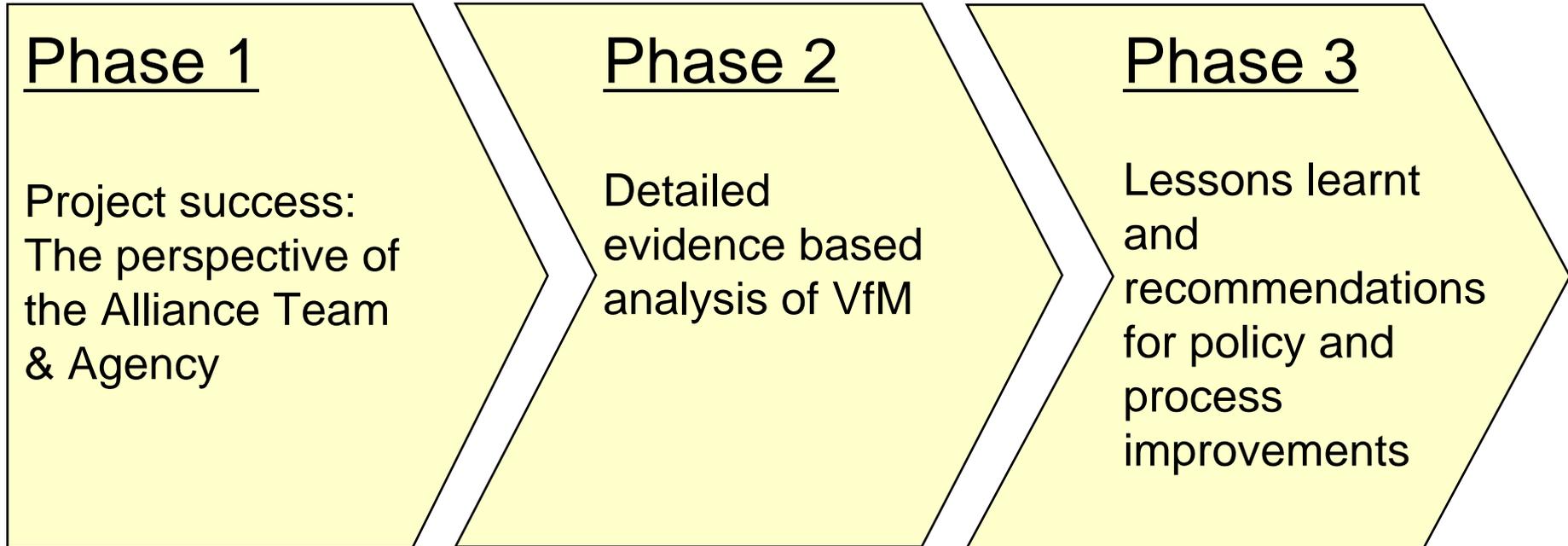
- + Inter-jurisdictional Alliancing Steering Committee
 - Treasuries of WA, QLD, NSW and VIC
- + The AAA
- + The Alliancing industry in general
- + The participants in the 14 case studies
- + Evans & Peck
- + Melbourne University



In Pursuit of Additional Value Benchmark Study into Alliancing

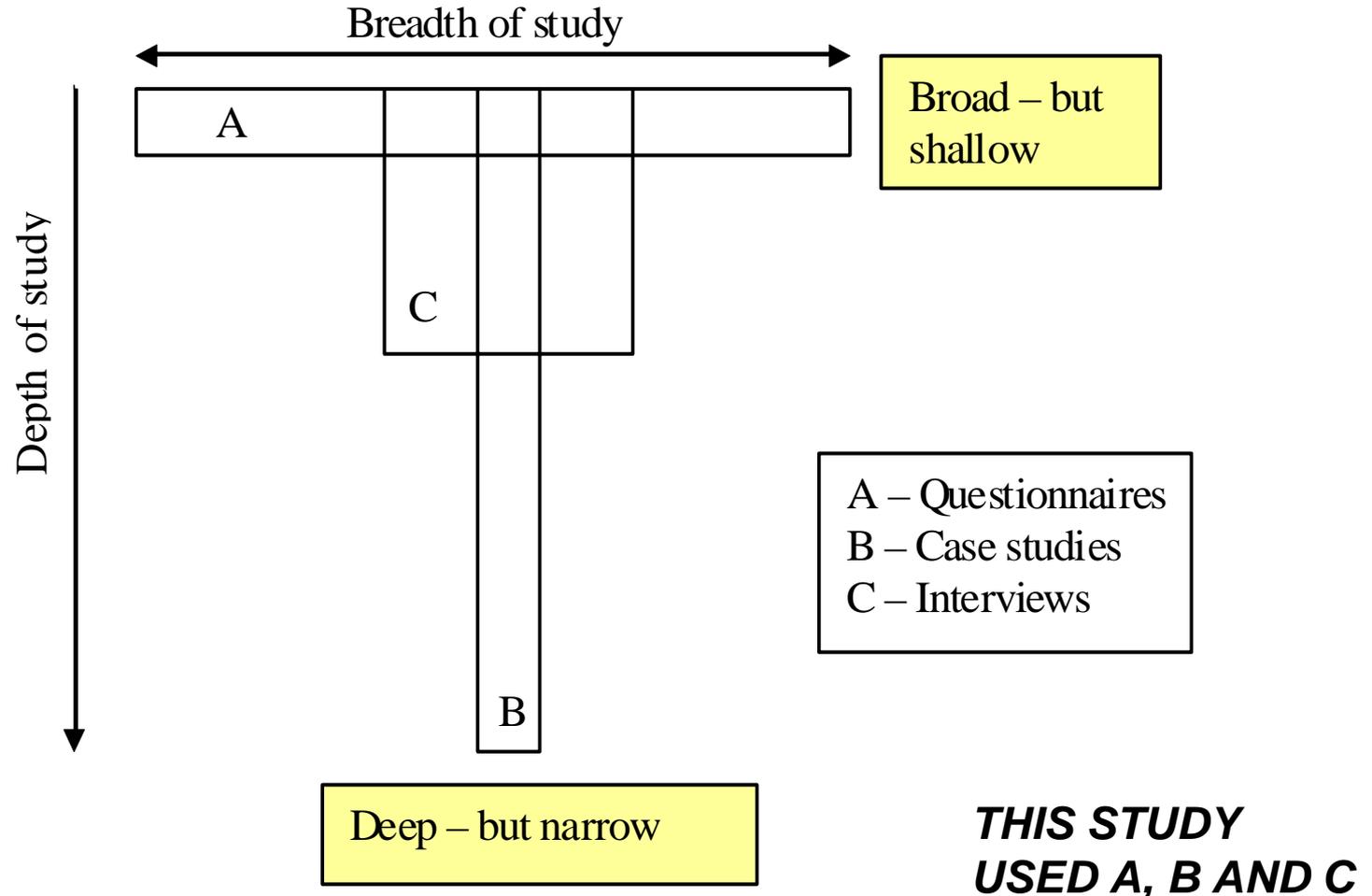
Study Methodology

Colin Duffield
22 October 2009



Study conducted in accordance with The University of Melbourne code of conduct for research & ethics approval ID: 0931719

Breadth vs Depth in 'question-based' research



Summary of research methodology

Establish research framework

- Conduct literature review of previous relevant studies
- Design research questions
- Design research method including approach to data gathering and analysis

Research Phase 1: Scan of current alliance performance in Australia

- Survey recent alliance teams via self-evaluation
- Validate survey data through interview and document review
- Analyse survey data to identify themes for more detailed analysis in Phase 2
- Select suitable participants for Phase 2

Research Phase 2: Detailed case study analysis

- Design case study research questions
- Conduct case study data gathering and analysis through interviews, document review and desk-based research
- Analyse case study data

Document research outcomes

- Document findings and conclusions
- Validate findings and conclusions
- Enhance findings and conclusions through discussion
- Document recommendations

Phase 1 study – the criteria for selection of projects

The Alliancing Association of Australasia (AAA) provided a list of current and past alliance projects. These projects were sorted by the study team to fit within the parameters of the study:

- government alliancing projects
- procured within the last five years
- valued over \$100 million
- either current or completed after 2004.

Seventy-one alliance projects were identified that came within the study parameters and the ALT members of these projects were approached to complete the survey.

A structured questionnaire for self completion was developed, posing questions regarding:

- name and composition of alliance (Owner, designer, constructor and advisors)
- alliance agreement format (project vs. program alliance, and single vs. multiple TOC)
- perceived alliance performance based on reported project outcomes of time, cost, quality of work, functionality, safety, environment, community, other stakeholders, team dynamics, KRA achievement, and flexibility of approach
- TOC comparison (initial, final and actual)
- project duration comparison (initial, final and actual)
- activities undertaken prior to selecting an alliance
- successful outcome indicators
- the possibility of using an alternative delivery method
- the use of cost criteria in the evaluation.

Phase 1 survey responses

Respondents were grouped into the categories of Owner's representatives and Non-owner Participants (NOPs),

- Non-owner Participants comprised constructors and designers.

82 responses were received from 46 alliances

- Response rate equated to 64% of the 71 alliances
- 36% of ALT members, 35 from Owners; 25 Constructors & 22 Designers

Spread of projects by states

- From the original list of 71 alliances,
- Victoria (18%), New South Wales (24%), Queensland (45%), and Western Australia (13%)

The response rate and spread of respondents is considered reasonable for the purposes of this study.

Selection processes in study sample

Non-price competition

- Also referred to as the 'single TOC'
- The NOPs are selected solely on the basis of non-price criteria.

Price competition

- Also referred to as the 'multiple TOC'
- The NOPs are selected using both non-price criteria and outturn price (TOC) criteria.

Hybrid

- There are various hybrids that include both non-price criteria and commercial criteria but not full outturn price. These may include competitive selection criteria based on design innovation, profit margins, budget pricing and commercial framework.

NSW

Queensland

Victoria

WA

While there are some similarities within and across states, with each emphasising the need for a procurement strategy, there are also many differences. For example:

- Assorted terminology and definitions (i.e. DCT, TOC, TCE, ALT, PAB)
- A diversity of steps to be followed and documents during the procurement strategy
- Contradictory information within documents
- Different project values noting when an alliance can be considered (ranging from \$5 million to \$50 million)
- Some states and line agencies note the different alliance approaches (price/non-price).

The key objectives of the case study analysis were to:

- explore and understand key factors and contextual influences on the individual alliances
- explore, understand and identify areas of potential enhancement or erosion of VfM throughout the lifecycle of the project
- explore and understand the alliance's concept of VfM vis-à-vis that in the Business Case
- establish an understanding of a broad range of aspects of the particular alliance
- make an assessment of the alliance's performance in a broad range of areas.

Criteria were used to select projects

- a balance of project and program alliances
- a mixture of NOP selection processes (non-price and price)
- projects from road, water and rail sectors
- a range of projects including those considered to perform well (time, cost, quality), reasonable and projects that did not perform well
- projects from Victoria, New South Wales, Queensland, and Western Australia
- projects where detailed data was available
- projects where the alliance staff were available for interviews
- projects that were well progressed or completed
- projects that were either nominated by the Owner or indicated in Phase 1 they were willing to participate in Phase 2.

Phase 2 sample set of projects

5 road projects, 6 water projects, 3 rail

2 projects from WA, 2 from Victoria, 1 from NSW and 9 from Queensland

12 project alliances, 2 program alliance

12 alliances that selected NOPs using non-price competition, 2 that used outturn price competition

- ▶ **The 14 projects were representative of the overall population of projects considered in Phase 1**

The extent of the research effort:

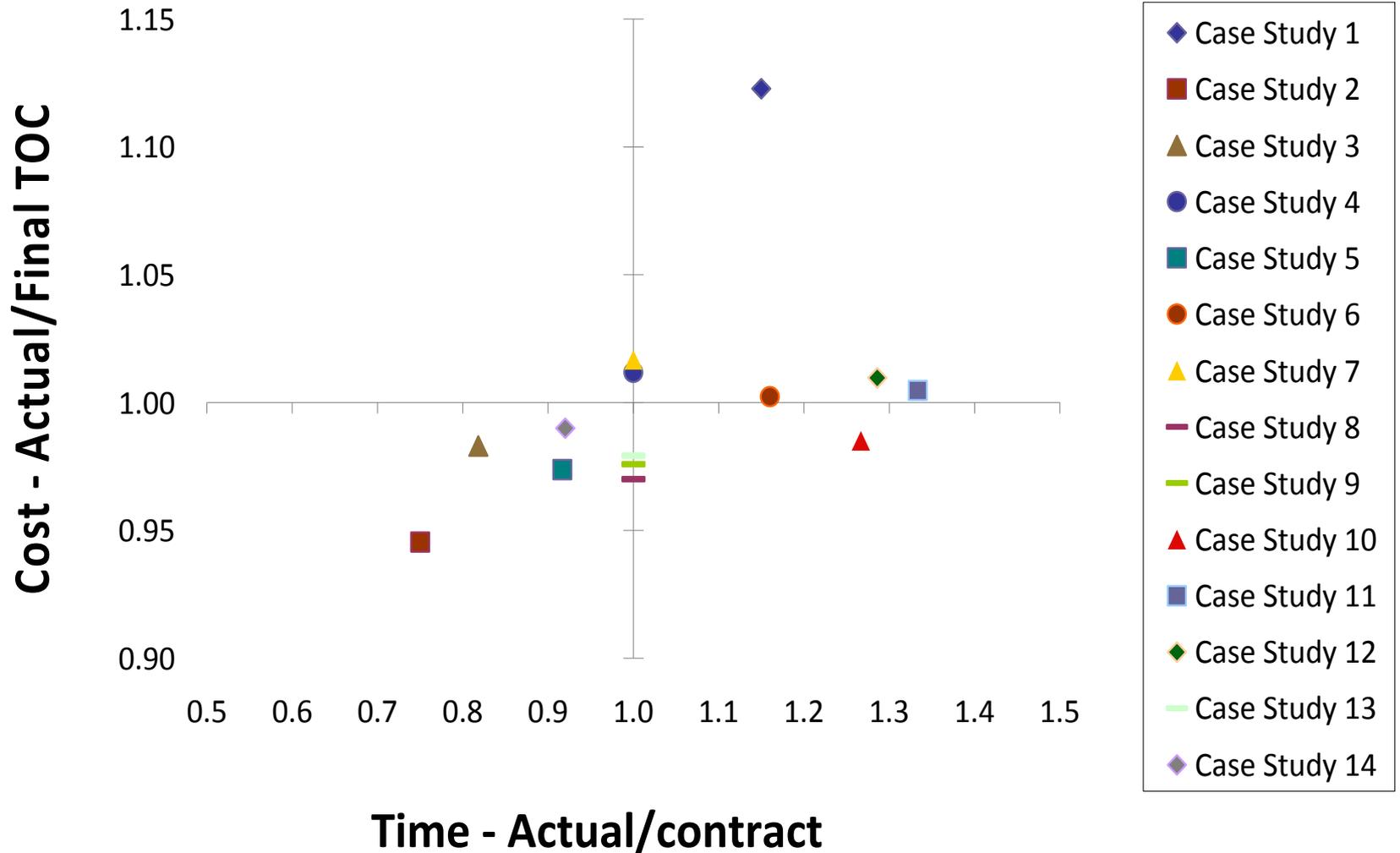
- **Since March 2009**
- **5,000 to 7,000 professional hours**
- **Approx. 20 people in the Research Team**

This equates to about 3 person years of senior staff time. It is more effort than a typical PhD that involves 3 years study and it was carried out by highly experienced practitioners and established leaders in the industry.

Study benchmark against other research

- A detailed questionnaire to all relevant projects was undertaken (the sample size of 71 is high with a 64% response rate is high)
- 14 in depth case study projects compares well with the 8 used in the Fitzgerald review of PPPs and other case study projects that typically have less than 10 projects

Phase 2: The delivery performance of the sample projects

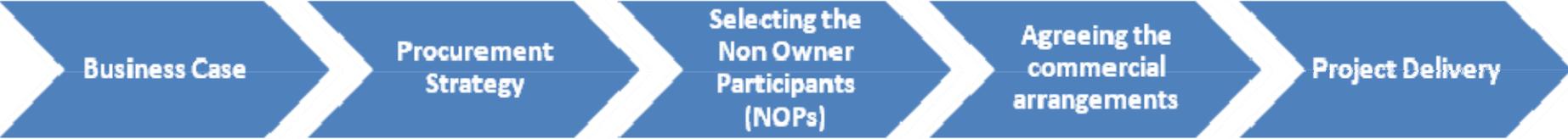


Conduct of case study investigation

Detailed face to face interviews with key Alliance Owner's representatives and Non-owner personnel

Detailed review of associated project documentation

Each stage of the project lifecycle was investigated and analysed



Business Case

**Procurement
Strategy**

**Selecting the
Non Owner
Participants
(NOPs)**

**Agreeing the
commercial
arrangements**

Project Delivery

Specific project identifiers kept confidential

Specific areas of investigation [1]

Ref	Project Element	Description
1	ALLIANCE DEVELOPMENT	
1.1	Project Need	Comprehensiveness of the assessment and documentation of the requirement for the project
1.2	Value for Money	VfM objectives used
1.3	Business Case	Comprehensiveness of the business case
1.4	Reason for Alliancing	The key reason to adopt an alliance
1.5	NOP Selection	The NOP selection process
1.6	PAA/TOC Development	The PAA and TOC development process

Specific areas of investigation [2]

Ref	Project Element	Description
2	ALLIANCE IMPLEMENTATION PERFORMANCE	
2.1	Time	Assessment of the delivery of the project in key areas
2.2	Relationships	
2.3	Cost	
2.4	Stakeholders	
2.5	Community	
2.6	Environment	
2.7	Safety	
2.8	Quality	

Specific areas of investigation [3]

Ref	Project Element	Description
3	ALLIANCE AGREEMENT – Variations in PAAs	
3.1	Insurance	Insurance arrangements
3.2	Performance Security	
3.3	No Blame/Blame	Dispute provisions
3.4	Fees	Nature of fees (variable/lump sum)
3.5	Pain/Gain	Pain/Gain mechanism
3.7	Completion Incentive	Any incentive/penalty provisioned in the PAA

Specific areas of investigation [4]

Ref	Project Element	Description
4	FEES – % OF INPUT COSTS – Competitiveness	
4.1	Designer	Related to designer inputs
4.2	Constructor	Related to constructor inputs
4.3	Pain/Gain	Awarded

Specific areas of investigation [5]

Ref	Project Element	Description
5	ESTIMATE AT TOC – Competitiveness	
5.1	Cost Analysis	The TCE and TOC mark-up on project DC
5.2	Supervision	Supervision as a percentage of DC
5.3	Total Indirect Cost	Indirect costs as a percentage of DC
5.4	Design	Design cost as a percentage of DC
5.5	Risk/Opportunity	Risk/opportunity allowance as a percentage of TCE
5.6	Escalation	Escalation as a percentage of TCE

In Pursuit of Additional Value
Benchmark Study into Alliancing

Findings and Recommendations

Peter Wood

Director, Australia & Middle East

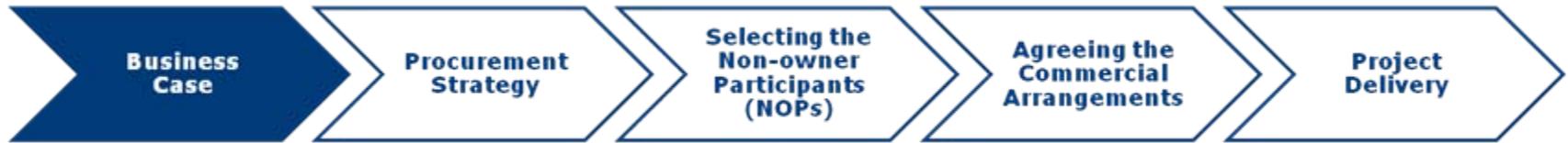


Findings

Structure of the findings

- Follows the project lifecycle (ex Govt Investment Guidelines).
- Considers VfM expectations at each stage of this lifecycle.



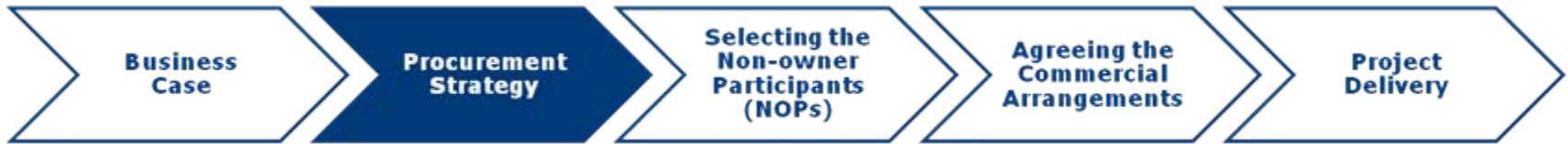


KF 1: Defining the project's VfM proposition

Business cases often did not clearly define the project VfM proposition to the rigour required for investment decision making.

Particular findings:

- Average increase from business case cost estimate to AOC was of the order of 45-55%.
- Business case assessment of an optimum delivery method often tended to 'default' to alliancing using a non-price selection approach for NOPs and did not consider a range of other delivery options.
- In general, a robust program and budget was not evident from the business case stage.



KF 2: Owner's rationale for selecting the alliance delivery method

Primary reasons for selecting the alliance delivery method, in addition to those contained in the DTF Project Alliancing Practitioners' Guide were:

- to achieve early project commencement through early involvement of the NOPs
- to progress the project development in parallel with the project approvals.

In general, Owner's specifically used alliancing and the non-price competitive selection approach to attract key resources and capabilities to a project in a buoyant construction market.



KF 3: Non-price and price competition

Non-price competition

- Owner representatives generally indicated moderate to high levels of satisfaction with the selection process
- Owner representatives sometimes noted that the selected NOP team members were either not made available to the project or left prematurely.



KF 3: Non-price and price competition *(cont'd)*

Price competition

Noting that the number of price competition approaches examined was limited to two case studies:

- Owner representatives reported a significant management demand on their organisation (compared with non-price selection approach)
- the total cost to establish a TOC using price competition (two TOCs) was less (of the order of 2% of TOC) than when non-price selection (single TOC) was used.



KF 3: Non-price and price competition *(cont'd)*

Price competition *(cont'd)*

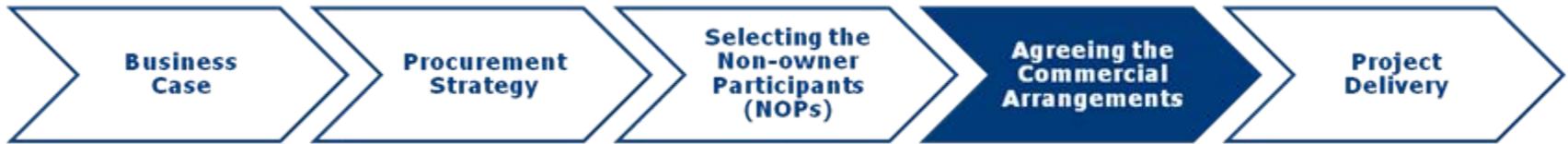
- the TOC was found to be of the order of 5-10% (of TOC) less, relative to non-price competition on the basis that the following items were lower (in aggregate and individually) when using price competition:
 - On-site overhead costs
 - Design costs
 - TOC development costs
 - NOP profit margins



KF 3: Non-price and price competition *(cont'd)*

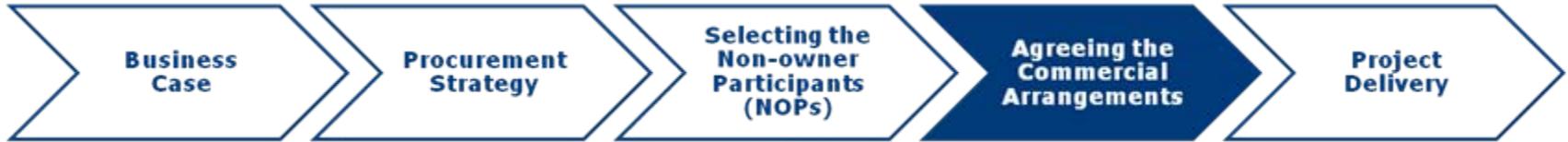
Owners on all alliances in the Study advised that good relationships had developed and that the participants worked well together as effective teams. No discernible difference was found between alliances that used price competition and non-price competition.

Generally NOPs have a strong preference for alliancing over other traditional delivery methods. Additionally, NOPs have a strong preference for non-price selection approach over price selection approach.



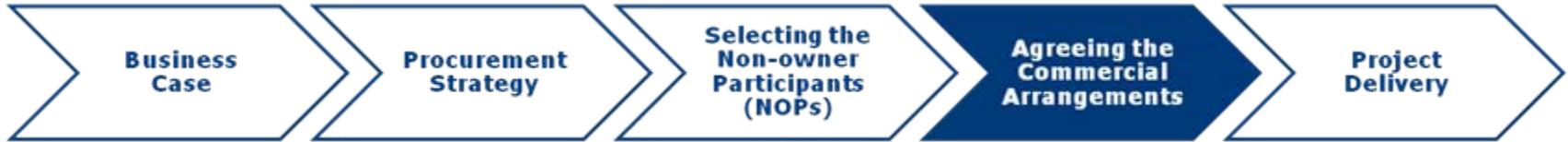
KF 4: Commencement of physical work

Often physical works commenced prior to finalising the commercial arrangements with the NOPs.



KF 5: Business case cost compared to initial TOC

In general, the agreed (initial) TOC was higher than the business case cost estimate. The average increase was of the order of 35-45%.

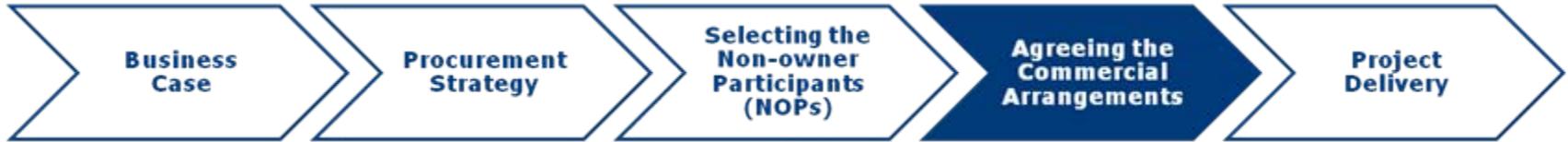


KF 6: Project Alliance Agreement (PAA)

A variety of terms and conditions were employed in the PAAs.

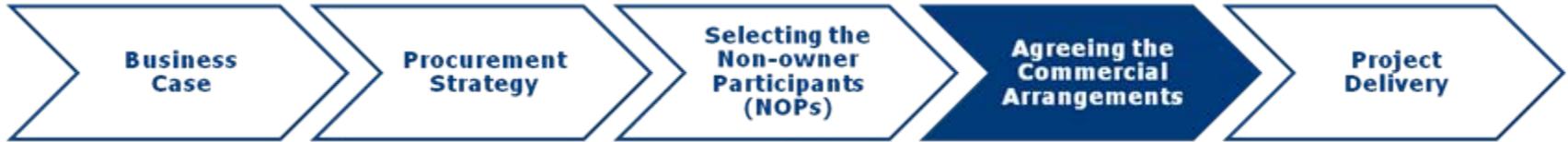
In particular:

- NOP corporate O/H and profit: Generally fixed upon agreement of the TOC, often variable as a percentage of actual costs.
- No blame clause: Generally unconditional; little indication of modified clauses.



KF 6: Project Alliance Agreement (PAA) *(cont'd)*

- Dispute resolution: Generally silent; little indication of express provisions for resolution beyond the ALT (outside the alliance).
- Incentive/penalty arrangements on time: Generally included; often not.
- Owner reserved powers: Often reserved powers stated; sometimes not.
- Performance security by NOPs: Little indication that security was required; generally not.

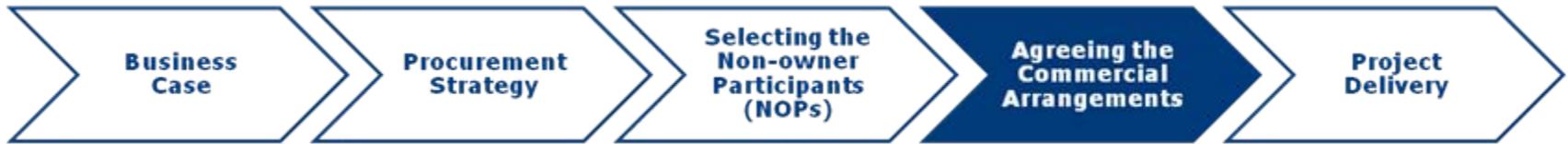


KF 7: Outstanding outcomes

Generally it is a requirement expressed in the PAA that the parties commit to achieving outstanding (game breaking) outcomes.

The commercial arrangements generally provide financial incentives for NOPs (incentivised KRAs) to achieve outstanding (game breaking) outcomes.

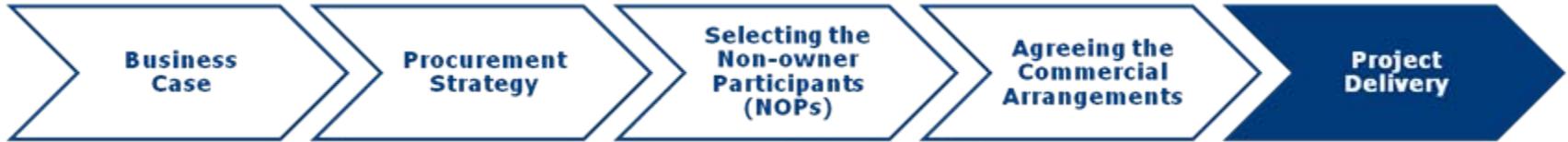
The costs associated with pursuing outstanding (game breaking) outcomes are often included in the TOC.



KF 8: Non-price objectives

In general, Owner representatives (regardless of approach to selecting NOPs) rated their alliance's performance in all areas of non-price objectives as above expectations or game breaking. The areas of non-price criteria assessed were:

- quality of work
- safety
- community
- team dynamics
- flexibility of approach
- functionality
- environment
- other stakeholders
- KRA achievement

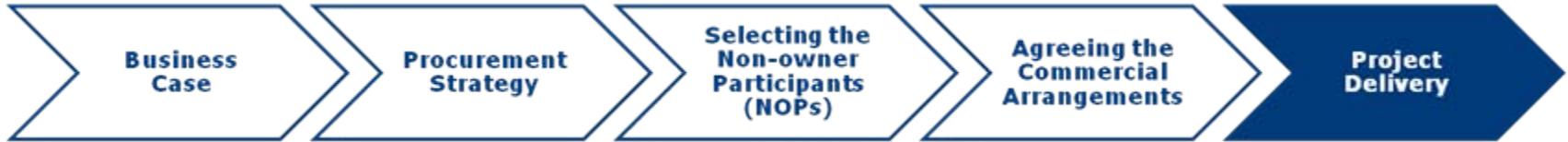


KF 9: Owner resources

The number of Owner resources provided to the alliances varied.

There was no clear correlation between the number of Owner resources and enhanced VfM.

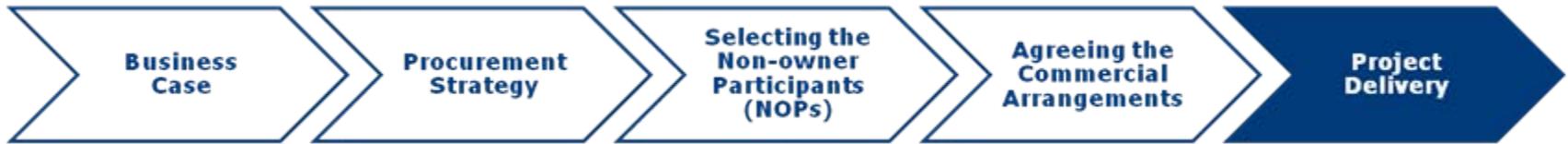
It was noted that active senior level participation by the Owner provided clear direction and support to the alliance.



KF 10: Early commencement of physical work and project completion

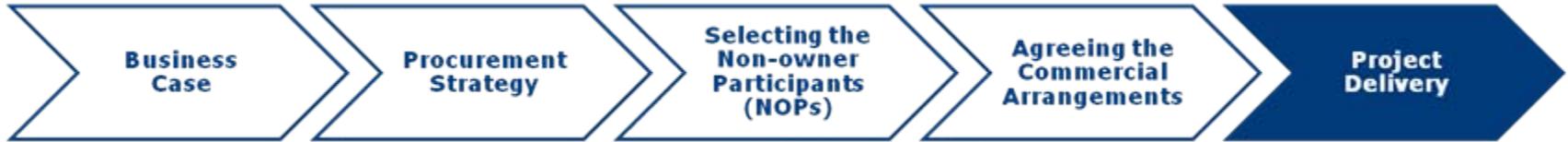
The project's physical works were able to be commenced many months in advance of what would have been possible using traditional delivery methods (as noted elsewhere) leading to a commensurate earlier completion date.

The majority of projects met the Owners' target completion dates as set out in the business case.



KF 11: No disputes

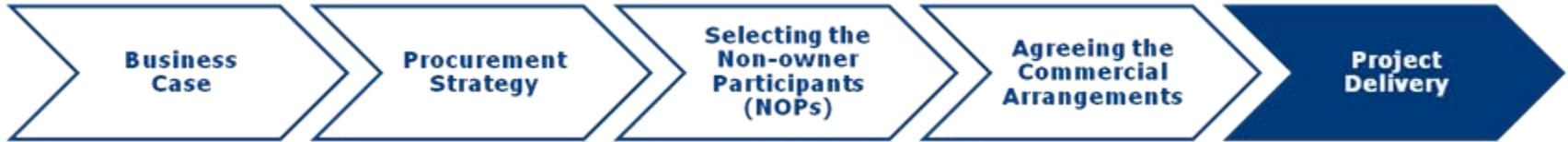
There were no indications of any disputes between the Owner and the NOPs that needed to be resolved outside the alliance.



KF 12: Outstanding outcomes (game breaking/ breakthrough)

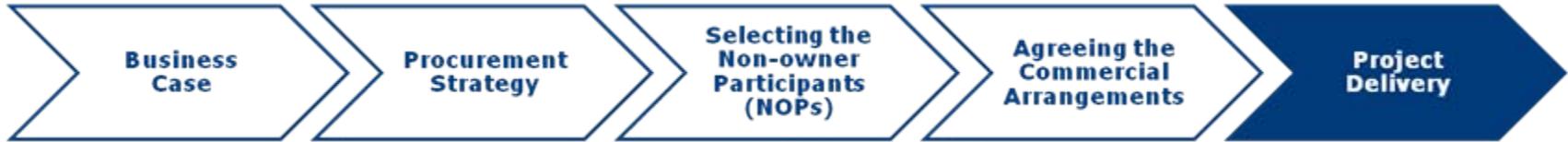
There was little indication that outstanding outcomes (game breaking / breakthrough) were actually being achieved within the definitions in use in this Study ('paradigm shift', 'not been done before').

This finding significantly differs with the self-evaluation of both NOPs and Owner representatives within the alliances who considered that their own alliances had achieved outstanding outcomes.



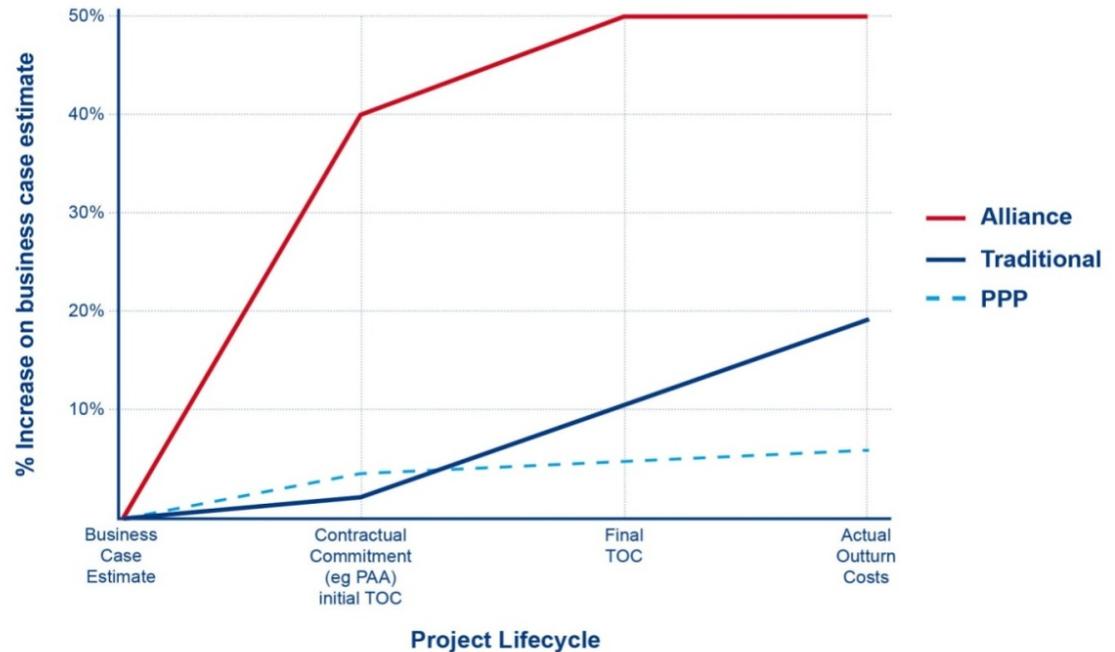
KF 13: Adjustments to agreed TOC

In general, there was an increase from agreed (initial) TOC to adjusted (final) TOC. The average increase was of the order of 5-10%.



KF 14: Adjusted TOC and AOC

In general, the AOC was less than the adjusted (final) TOC. The average saving was of the order of 0.5%.



Conclusion

Overview

- It can be concluded that VfM can be enhanced in the alliance delivery method.
- Alliancing has demonstrated its ability to avoid disputes, improve non-cost outcomes and commence projects earlier than by traditional methods.
- To extract optimum VfM from alliancing, changes must be made at both the alliance and whole of government levels.

Conclusion

Enhancing whole of government VfM

Business case

- VfM definitions and the value proposition in the business case are the responsibility of the Owner, not of the alliance which has been engaged to deliver the capital asset component of the business case at the lowest price.
- The role of the Owner needs to be distinguished from the Owner's representative on the alliance, who only has responsibility for delivery and has no authority to change the business case.
- PPPs provide the greatest cost certainty at business case stage (an increase of 5-10% to AOC), followed by traditional ($\approx 20\%$) and then alliances ($\approx 50\%$).

Conclusion

Enhancing whole of government VfM

Business case

- The business case cost estimate must be considerably improved to better inform the capital investment decision. Alternatively, the business case should include explicit advice to investment decision makers regarding the risk of potential increases.
- Fast track processes need to be developed where time of commencement is of the essence and decision makers need to be alerted to the significant price premium that may be associated with fast tracking.

Conclusion

Enhancing whole of government VfM

Procurement strategy

- There is a plethora of selection guidelines on the use of alliancing that are inconsistent, confusing, do not reflect current practice and are not focussed on optimising VfM.
- It is possible that the primary competition is occurring on the buyer (Owner) side as they seek to attract NOPs to their own project using the alliance delivery method and non-price criteria, both of which are highly favoured by NOPs over traditional delivery methods.
- A consistent approach across jurisdictions would improve the procurement strategy and buying power, and ensure consistency in government engagement with industry.

Conclusion

Enhancing whole of government VfM

Selecting the NOPs

- Current guidelines recommend selecting NOPs using predominately non-price criteria.
- This does not always reflect good government procurement practice which requires price to be included as a significant criterion.
- Whilst price competition is not appropriate in all circumstances, it should be required as a default position.

Conclusion

Enhancing whole of government VfM

Agreeing the commercial arrangements

- The range of the PAAs in use in Australia is neither efficient nor effective for government or industry.
- An alliance is a complex commercial transaction.
- A standard form of contract that is robust, tested and clearly understood by all parties. This would improve legal certainty and transaction efficiency for government and NOPS.

Conclusion

Enhancing whole of government VfM

Agreeing the commercial arrangements

- Government would benefit by taking a portfolio management approach to procure and deliver projects. This would enable the WOG risk (and associated insurances) to be managed more effectively.
- This approach would also enable government to achieve synergies across multiple projects through leveraging buying power, smoothing resource demands, and possible consolidation of some activities to achieve economies of scale.

Conclusion

Enhancing whole of government VfM

Project delivery

- Governance arrangements above the alliance vary significantly from project to project and little guidance exists. A standard governance arrangement would improve understanding of roles and authorities and more effective and efficient project delivery.
- An increase in the TOC of approx 5-10% during project delivery raises doubts on the widespread perception of certainty of the initial TOC compared to traditional methods.
- Savings on the TOC are negligible.

Conclusion

Enhancing alliance VfM

Business case

- Alliances are often associated with uncertainty and complexity. This requires greater, not less, rigour in the business case to ensure that adequate anchoring, benchmarking and guidance is provided to the alliance team.
- As a minimum the business case should include the value proposition which incorporates the project objectives, agreed funding of 'externalities' (for example environmental, stakeholder relations) and a robust cost plan. It should (barring sections subject to confidentiality) be made available to the alliance team.

Conclusion

Enhancing alliance VfM

Procurement strategy

- Procurement strategy should be selected on the basis of the project characteristics.
- The selection of the alliance delivery method to attract scarce resources or to start the project earlier may not be appropriate if the associated price premium is considered. This premium may be acceptable if the risk profile of the project is high, however, for lower risk projects the premium may be excessive.

Conclusion

Enhancing alliance VfM

Selecting the NOPs

- The selection criteria used for selecting the NOPs should encourage innovation and efficiency.
- Although not always appropriate, price competition can achieve this by providing productive competitive tension.
- The selection process should not be overly prescriptive that it stifles NOP's ability to provide technically and commercially innovative offers.

Conclusion

Enhancing alliance VfM

Agreeing the commercial arrangements

- Although the philosophy of alliancing is non-adversarial, the alliance is a commercial transaction and the alliance legal agreements (PAAs) must be appropriate to that commercial transaction.
- The complex nature of alliances can result in Owners being exposed to serious asymmetry of information, commercial capability and capacity in their engagement with the NOPs.

Conclusion

Enhancing alliance VfM

Agreeing the commercial arrangements

- Owners should ensure that any asymmetry is identified and addressed to enhance VfM outcomes.
- The exposure of Owners can be increased when there is no price competition as there has not been the 'traditional' competitive tension which can alleviate such asymmetry.

Conclusion

Enhancing alliance VfM

Project delivery

- Effective alliance governance is critical to project success.
- The alliance delivery method is mature and an optimum governance structure needs to be researched, defined and applied.
- Decision rights need to be clearly articulated, particularly the role of the government, the Owner and the Owner's Representative.
- Through project delivery, the Owner may continue to be exposed to commercial asymmetry. It is important that the Owner establishes capability to represent its interests in the alliance at a level commensurate with the commercial capability of the NOPs.

Conclusion

Enhancing alliance VfM

Project delivery

- Outstanding outcomes ('paradigm shift', 'not been done before') are often sought by Owners when selecting the alliance delivery method and they are generally a requirement in the PAA.
- There was little evidence that outstanding outcomes are being achieved despite significant investment in 'high performance teams'.
- There is little point in pursuing outstanding outcomes if they are not required to satisfy business case objectives.

Conclusion

Realising improved VfM

- A number of recommendations have been made to optimise VfM at both WOG and alliance level.
- They will improve the quality of the investment decision, optimise the appropriate use of alliancing, increase government's buying power, increase transaction efficiency, increase technical and commercial innovation and allow for best practice to be captured and disseminated.
- If all of these recommendations are adopted, the AOCs of alliance projects could, in the judgement of the Research Team, be improved by 5-15% without diminishing the many benefits that alliances are capable of providing.

Recommendations

No. 1

The alliance delivery method be retained and developed further as one of the mature procurement strategies for the delivery of government's infrastructure projects that are complex with significant risks that cannot be dimensioned in the business case or soon thereafter.

No. 2

The State Treasuries collaborate to develop a comprehensive Procurement Selection Guide and training materials for use by government agencies on when to use the alliance delivery method.

Recommendations

No. 3

The State Treasuries (and relevant line agencies) collaborate to develop common policy principles, guidelines and training for the selection of the NOPs and implementation of the alliance delivery method that reflect the outcomes of this Study.

No. 4

Governments take a greater role in ensuring that alliance best practice is captured and disseminated; and also take a greater oversight role on individual alliance projects to ensure that VfM is optimised at WOG level.

Recommendations

No. 5 (i)

An adequate business case, which includes the case for the procurement decision, to be prepared and approved as required by relevant state government guidelines before the alliance selection process commences. (This will recognise the development of fast track processes for times of genuine urgency such that the alliance is provided as a minimum with appropriate delivery objectives and a robust cost plan.)

Recommendations

No. 5 (ii)

Furthermore, business cases that recommend an alliance delivery method must:

- considerably increase the accuracy of their capital cost estimates and scope statement
- address how the state will manage possible asymmetry of commercial capability and capacity in engaging with alliance NOPs throughout the project lifecycle.

Recommendations

No. 6

A competitive process should be used as the default approach to selecting NOPs having price (including outturn costs/TOCs) as a key selection criterion. This will be consistent with established government procurement policies that support a competitive process with one of the key selection criteria being price unless compelling reasons (which are outlined in the same government procurement policies) for non-price competition can be made and approved.

Wrap up

- + The Inter-jurisdictional Alliancing Steering Committee (the Treasuries of WA, NSW, QLD and VIC) will consider the findings and recommendations of the Study, and use the Study to develop during the first half of 2010:
 - common **policy principles** for the planning and practice of Alliancing projects
 - a new ***Practitioner's Guide to Alliancing*** that will replace Victoria's current *Project Alliance Practitioners' Guide*.
 - **training programs** for public officials in the planning and practice of Alliancing projects.
 - various **Guidance Notes** on specific topics of interest to Alliancing practitioners will be released from time to time