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Best for Project: Factors that Influence the Selection Decisions for Leadership Teams in Alliance Mega-Infrastructure Projects

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Best for Project: Factors that Influence the Selection Decisions for Leadership Teams in Alliance Mega- Infrastructure Projects

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Abstract

This study contributes to the understanding of the selection decision-making process as it applies to project management teams. It particularly focuses on the elements that influence selection decisions in alliance mega-project structures. It uses a significant Australian infrastructure mega project as a case and through a retroductive approach, which combines elements from deductive and inductive research (Downward & Mearman 2007) examines what is going on in the selection process for the hiring of the senior leadership team. Although people selection is commonplace in business, and businesses are more and more using project structures, the nuanced rationale of this study and its value lies in asking what does the selection of project leadership teams mean - apart from the obvious (Alvesson 2003)?

Decision-making literature recognises the critical role that organisational context plays in providing antecedent conditions for decisions. This study examines the situational, environmental and contextual settings in which project leadership team selections decisions are incubated.

This study shows that complex factors influence the way senior leaders are chosen for mega infrastructure projects. Orthodox selection processes do not adequately explain how such appointments are made. This study, using a combination of semi-structured interviews, documentary evidence and insider observations of the project leadership team formation processes, asserts that latent factors affect selection decisions more so than the espoused traditional selection techniques. These latent factors, such as the relative power of key stakeholders, the commitment of key decision makers to long term learning from alliance partners, and the nature of the relationship between alliance partners, are rarely considered, often taken for granted, and difficult to measure but they are powerful forces that need to be considered in selection decision making processes in mega infrastructure projects.

Acknowledgments

One of the parent messages that I have lived with throughout my life is *'Knowledge is no burden to bear'*. My mother and father modeled and encouraged me to be open to all opportunities for learning no matter what my age. And so I find myself here. My wife Raelene, daughters, Kandace and Cy have been partners in our collective journey in search of understanding and wisdom and now I see the same in our grandchildren with their thirst for learning and their excitement with the smallest piece of insight; they are seeds to be nurtured in their future reality and thought-worlds. This has been and is my inspiration.

Inspiration without action leads to little and so I must first acknowledge Dr Sue Slowikowski who challenged me to test, share and build my commercial world experiences and expertise under academic rigor. Without her initial prodding, and 'handholding' my way back into the academic arena, I would not have pursued this opportunity. Through this journey, I have been blessed with a number of high quality supervisors who brought different perspectives and questions to me from their depth of knowledge and proficiencies. Firstly, Dr Karin Garrety helped shape my ambitious scope of research and charitably transitioned my mercantile mind into some kind of academic rigor. Dr Peter Mclean has been with me all the way through this trek and without his understanding and support, I would never have brought this research to a quality conclusion. His specific insights into power and discourse have been a great reflector for my thoughts and findings. Professor Nina Reynolds came late but timely to my expedition as her critical eye tightened my research findings and conclusions. Lastly, I would like to thank Associate Professor Rodney Clarke who has been encouraging as an enthusiast, guide and sounding board, genuinely interested in my personal journey.

Finally, I go back to another of my parent messages. *'It is not what you've got but what you do with it that counts.'* I pray that I can honour all those who have helped me by taking these new insights and doing something truly worthwhile.

Certification

I, Paul A. Lindeberg declare that this thesis submitted in fulfilment of the requirements for the conferral of the degree Master of Management - Research from the University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. This document has not been submitted for qualifications at any other academic institution.

Paul Arthur LINDEBERG

25th June 2018

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CHAPTER 1: INTRODUCTION

1.0 *'Existing literature on employee selection contains an abundance of knowledge of how selection should take place but almost nothing about how it occurs in practice'* (Bolander & Sandberg 2013, p. 285).

1.1 **Aim of the Study**

There are major consequences in any people-selection situation to getting it wrong. These consequences are amplified in alliance leadership teams in mega-infrastructure projects. This study contributes to the understanding of the selection decision-making process as it applies to project leadership teams. It particularly focuses on the factors that influence selection decisions in alliance mega-project structures. It uses a significant Australian infrastructure mega-project as a case and, through a retroductive approach, which combines elements from deductive and inductive research (Downward & Mearman 2007), examines the selection process for hiring the senior leadership team. While businesses are increasing the use of project structures, the nuanced rationale of this study and where its value lies is in asking the question: what does the selection of project leadership teams mean, apart from the obvious (Alvesson 2003)? Taking familiar subjects and familiar contexts and applying a strategy of 'defamiliarization' (Alvesson 2003, p. 185) heightens awareness of any differences.

1.2 The Significance of the Study

1.2.1 Why Single-case Studies Are Important

The research used a case-study approach to assess what factors, and in what context those factors were considered when deciding to select individuals for a project leadership team. A case study can be understood as: 'A research method that involves investigating one or small number of social entities or situations about which data are collected using multiple sources of data and developing a holistic description through an interactive research process' (Easton 2010, p. 119). Conventional wisdom that a single case study cannot provide reliable information about the broader class 'is so oversimplified as to be grossly misleading ... , if not directly wrong' (Flyvbjerg 2006, p. 220). Flyvbjerg's (2006) research about case-study research is based on two overarching premises about their role in human learning: one, that case-studies produce 'the type of context-dependent knowledge that research on learning shows to be necessary to allow people to develop from rule-based beginners to virtuoso experts', and two, that if there is only context-dependent knowledge then it rules out the possibility of epistemic theoretical construction. 'Given the heuristic value, the single-case [research] approach, should not be abandoned' (Cubelli & Della Sala 2017, p. A1). This study is not literature-centric; it is a study of one case so the findings and conclusions are more organisation and context-centric. This is in no way to diminish the value of studying a single case, as critical and paradigmatic cases 'achieve information that permits logical deductions' and 'helps develop a metaphor or establish a school for the domain that the case concerns' (Flyvbjerg 2006, p. 230). Process-based single-case research 'provides unique opportunities for understanding possible configuration of underlying social reality' (Andersen et al. 2018, p. 539).

1.2.2 Why a Project-team Case Study

Project teams are formed to achieve a specific outcome. The current view is that the initial team composition is like assembling a jigsaw, where missing segments of relevant knowledge have to be found and fitted into a perfect whole (Ratcheva 2009). Inter-firm resourcing of projects is commonplace as firms 'cannot keep their entire set of resources in-house and at the same time capture all of the opportunities available' (Lew et al. 2013, p. 1103). Understanding the implications for functioning and consequent success of multidisciplinary project teams highlights the critical need to reconceptualise the boundaries of project teams (Ratcheva 2009). For example, critical elements such as relationship capital and knowledge diversity are at best often no more than implied, if not ignored in the selection of project management teams. Relationship capital here has both micro and macro meanings. In a macro sense it is the contacts, networks and experience of people and cultures that the individual may bring to the project. The micro relationship capital is the positive personality traits, interests and skills that, when invested in the project, bring positive working relationships and teamwork synergies (Doloi 2009). The individuals' knowledge diversity has similar capital. For example, in a multi-disciplinary project an individual's knowledge across disciplines makes for both ease and quality of communication and supportive problem-solving processes. If the worth of such elements is acknowledged as being unique to each project, they become more important and add high value to the process and outcomes. A leadership team is responsible for understanding and delivering client satisfaction. "Client" in this study is not limited to an economic or consumer construct.

The study of an individual project's unique elements expands the horizon of decision-making and allows epistemic theoretical construction. By examining this as a fundamental part of selecting project management teams, particularly in the case of alliance mega-projects, the study will produce insights relevant not only to the organisations being studied but to academic understanding and broader decision-making issues as well as other project-based businesses.

1.3 The Contribution of this study

While theorists have studied project management and in particular the selection of project management teams (see, for example, Radu 2014), there is little interpretivist research on in-practice decision-making in the selection of project leadership teams (Bolander & Sandberg 2013). This study aims to shine a light on the real-world practices of selection in these specific environments and gain some insight into the success (or otherwise) of some of these practices. The contribution of this study is in part practical - giving a perspective on decision-making and practice orientation for selection in a specific environment - and part theoretical in the project and selection domains.

A summary of the theoretical, methodological and substantive contributions of this study of factors affecting selection decisions in a project leadership team is set out in Tables 1.1, 1.2 and 1.3 below. These contributions will be explained in detail in chapter 5.

Table 1.1 Theoretical contributions

T1	Examining latent agendas of the stakeholders adds to our u understanding of key factors in the selection decision-making process.
T2	Extending understanding of how contextual factors impact on selection decision-making in project leadership teams.

Table 1.2 Methodological contributions

M1	Retroduction used at a meso-level to identify how decisions are made in the process of selection of the Project Leadership Team (PLT).
M2	An empirical example of the use of how multiple sources of data collection can be used in a retroductive study.

Table 1.3 Substantive contributions

S1	Adding to the study of selection in project leadership teams by empirical data from an insider's perspective.
S2	Broadening the debate on leadership selection in the project environment.
S3	Providing empirical evidence of the phenomenon of selecting for project leadership teams from the standpoint of alliance organisations.

1.4 Statement of the Problem

The exponential growth of knowledge across industries and disciplines has made it extremely difficult for some businesses to work in isolation. Consequently, some forms of joint ventures (JVs), alliances or networked organisations are becoming increasingly common. The increasing projectification (Beringer et al. 2013) of company activities has meant an increasing amount of company expenditure and management focus on project-organised ventures. The project approach is not new and numerous studies have shown that project success depends on the positive engagement of management (Conforto & Amaral 2016; Gomes et al. 2001; Kopmann et al. 2017; Swink et al. 2006).

According to Ratcheva (2009), project teams need to overcome three boundaries – the project action boundary, project knowledge boundary and project social boundary – to reconceptualise the boundaries of multidisciplinary project teams.

These boundaries are amplified when the project is undertaken in an alliance working construct. Project success will be determined by how well boundary-spanning activities are achieved, particularly in projects where a number of disciplines are involved (Ratcheva 2009). Although this suggests the complexity of working in and managing alliance project management teams, as it was in the case in this study, the research examines to what degree Ratcheva's assertions are justified.

Identifying what success looks like and what client's value are key to the management of clients' expectations during the project and the ultimate delivery of a result (Eskerod & Ang 2017). Financially, 'if client values are not fully understood in a construction project it is likely to result in either low fulfillment of client expectations or multiple design alterations during the project process which lead to additional costs and frustration among the project participants' (Thyssen et al. 2010, p. 18).

1.5 Research Question

The research question is as follows:

What factors influence the selection decisions for leadership teams in alliance mega-infrastructure projects?

The research question has two clear components of *what* is being researched in this study: its *scope*, which is somewhat hierarchal, and its *process*.

Table 1.4 Scope of the research study as defined by the research question

Term	Explanation
Project	Project approach - as opposed to operating in a more traditional business model
Infrastructure project	Infrastructure not IT, medical or other types of projects
Mega-infrastructure project	For the purpose of this report, the Australian commercial working definition of “mega” is projects in excess of Aus\$1bn in budget and exceeding one year in duration.
Alliance	An alliance is a group of two or more organisations pooling their resources to achieve the project outcome as opposed to traditional construction projects which engage a primary contractor, who in turn engages sub-contractors.
Leadership team	The focus is on the senior leadership team only - the most senior project management group – rather than other stakeholders such as the board or project employees.
Selection	The process of choosing members for the team; it focuses only on their selection, not on performance or salary packages. How did they, as opposed to others, come to hold these positions?

The scope is further tightened in that this study is a case study of a particular Australian mega-infrastructure project. The second component, the decision-making process, and primarily the elements that influence this process, is the core of the study.

1.6 Background to the Study: The Case

1.6.1 The Business Case

The business case for Project North - the construction of a fully-integrated chemical plant - had been developing for years, if not decades. The final product of the plant had been imported and sold into Australia monopolistically for more than 20 years. The market for the product was increasing both domestically and internationally which meant both increasing volumes and margins for the Australian monopoly. Company A was a direct competitor of the Australian monopoly further down the supply chain; this left company A both supply and price-vulnerable. When the opportunity to purchase a plant in the USA that could be retrofitted came about in 2006, Company A seized on it, and the project of constructing a plant in Australia to serve the domestic market and potentially sell the surplus product into Asia, began in 2007.

Project North was a hybrid alliance between an engineering specialist, a mechanical-construction specialist and a civil-construction specialist. According to the website of one of the partners, the alliance partners entered into an agreement with the client group's wholly owned subsidiary to deliver the project. The Company's website stated that the project involved the construction of a 330,000 tonnes-a-year fully-integrated chemical plant and associated infrastructure in regional Australia.

Project North had a chequered history with two previous attempts to construct the plant making little or no progress. Initially the engineering specialist was commissioned by Company A to disassemble the plant in the USA and bring it to Australia. They were also asked to re-engineer it and engineer the supporting infrastructure to construct a fully-integrated plant in regional Australia.

It was Company A's intent that this would be the first of two plants to be built in Australia, as their research into the Asian market suggested an off-take well in excess of the capacity of the initial plant. Despite holding Letters of Intent, Company A was quickly overwhelmed by the billion-dollar drain from the project on their core business and the project was abandoned in December 2007.

After the client's buy-out of Company A in March 2008 the project was resurrected in July 2008. The lead contractor, an engineering contractor, from the initial attempt was retained. The second attempt, this time by the new owner, was put on hold shortly after the Global Financial Crisis (GFC) in December 2008. This meant essentially slowing down, stopping and deferring expenditure on procurement activities. All site activities ceased and were de-mobilised, however there was quite a large volume of procured goods being bought that now needed to be placed in storage, held or stopped. Hard decisions had to be made on whether the client completely exited the project, took financial penalties or just slowed the project's progress. At this time the project was being run by the engineering specialist from their head office on a straight-up cost-plus execution model.

Tighter money markets and overall greater financial sensitivity, both results of the GFC, meant a further hiatus in the project as the client reviewed its status and considered their options. The economic benefit in terms of value to the client is the project's net present value, discounted for risk (Turner & Müller 2003).

The client was a chemical producer and had no experience or expertise in what was described in industry terms as an EPCM – an Engineer, Procure, Construct and Maintain project. Instead, the engineering specialist, mechanical-construction specialist and civil-construction specialist, came to the client with an execution model to complete the project.

The client went through a process of negotiation with those specialist companies, to which they referred as the Alliance. The managing director of the engineering specialist was the key driver of the project's third iteration and the key influencer in all project decisions including people- selection. The alliance agreement was based on a cost-reimbursable model incorporating a risk-reward regime to ensure the best project outcomes. The Alliance was committed to delivering Project North with zero injuries, under budget and ahead of schedule, using a “best for project” philosophy. The project's third attempt commenced in the first quarter of 2010 and ended in the third quarter of 2012. The construction workforce of 600 personnel peaked in the second and third quarters of 2011. The total value of the contract was estimated at approximately AU\$935 million and the final cost was AU\$1.45 billion. A major external environmental factor was resource availability. Despite the GFC, there was a resources boom in Australia and people – particularly those with high-quality skills and experience - were not readily available.

1.6.2 The Project North Governance Structure

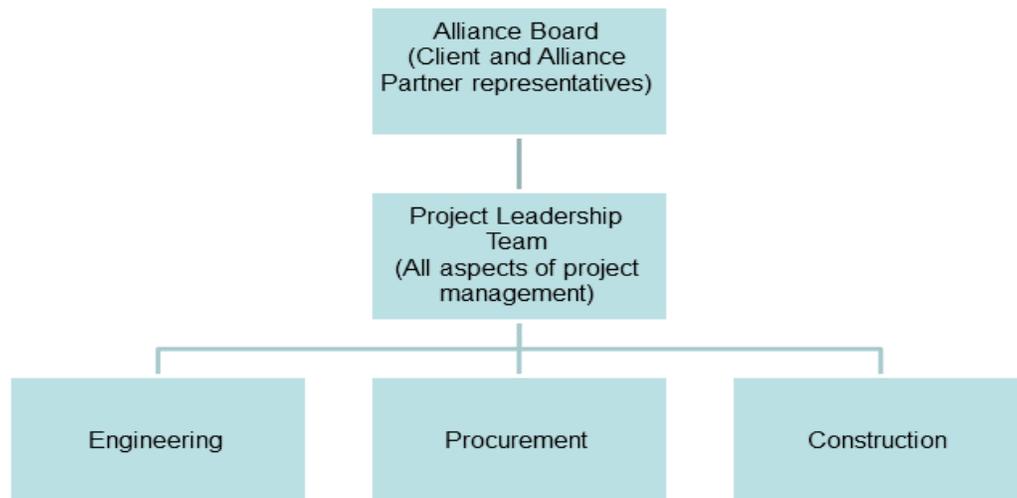
Engineer, Procure, Construct and Maintain (EPCM) projects are typically undertaken with a principal contractor who manages the client and sub-contracts the work. Project North was unique in that the client took the lead role in the procurement and maintenance contracts in the project. The specifications and budget for maintenance did not fall within the scope of Project North; thus it was, in reality, an EPC project.

Furthermore, although the three Alliance partners were said to have complete oversight of the total EPC work, this is questionable, as the engineering specialist was solely responsible for engineering. Because the client took control of procurement, the Alliance was realistically only for the construction component of the project.

There was a fixed price for engineering and a fixed profit, which was at risk for certain key performance indicators and a reimbursable plus an agreed margin for the construction component. The justification for this was that it was, according to the company's website, *'the biggest commitment the company has ever made'* in their corporate history. With all project stakeholders strongly invested in the project's success (in other words, its profitability for Alliance members), there was very tight oversight of all activities. This led to a governance structure headed by what was called the Alliance Board, which was made up of three members of the client organisation and a senior person from each specialist company. The project director, head of the project leadership team (PLT), also sat in on most of the Board's meetings but had no voting rights and participated only in an advisory capacity.

Figure 1.1 - Project North governance structure

Project Governance Structure



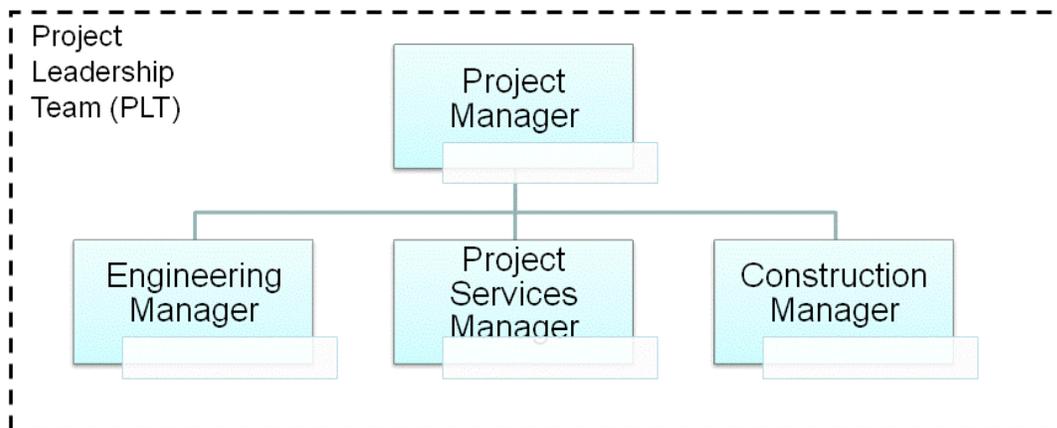
Source: Project Protocols presentation 31st March 2010

1.6.3 The Project North Leadership-team Structure

Due to the history of the project and the investment that had been made by both the client and the lead contractor, the Project North Alliance venture from the outset quoted a stretch variation on the common project-delivery mantra of “on time, on budget, on specification”: specifically *'The Alliance is committed to delivering the North project with zero injuries, under budget and ahead of schedule'* (Project North Executive Team briefing March 2010). The Alliance Board adopted a *best for project* philosophy to guide their behaviour and decision-making.

They proactively carried this philosophy through all aspects of project management and operations. With this as the guide it would be expected that the critical decisions of filling the most senior roles on the project – the project leadership team (PLT) – would encompass a disciplined decision-making process.

Figure 1.2 - Proposed Project North leadership team organisation structure



Source: HR Records January 2010

The Alliance Board clearly defined the targets, budgets and key deliverables for the PLT. There was no expectation that these would vary significantly during the course of the project. The Board also developed incentives to achieve a reduction of up to AU\$25m in the total cost of the project and an improvement of two months to mechanical completion. Cost targets were in the areas of procurement and onsite productivity; in other words, construction. Given the history of the project very few people believed that any incentive payment would be forthcoming.

1.6.4 The Legacy of the Previous Attempts

Legitimacy is a concept meant to capture the beliefs that bolster willing obedience (Levi et al. 2009). Projects need to gain legitimacy among external and internal stakeholders. Legitimacy is an important resource for gaining other resources. In this project legitimacy was the antidote to two previous failed attempts at securing investment. In this light, in buying out Company A the client's shareholders inherited a project-in-process (Project North V2) and assessed Project North V3 as a new venture as opposed to a partly complete project. However, those who were required to justify a third attempt at completing the project still needed to overcome the legacy of the illegitimacy that was associated with the previous failures. In uncertain situations such as the third attempt at Project North, social systems evolve prescribed scripts, rules, norms, values and models that are reinforced throughout the system and that come to be accepted by social actors, as legitimate, that is, acceptable, desirable and/or appropriate (Zimmerman & Zeitz 2002). The client thus needed the Alliance members to accept their systems - rules, norms, values and models - as legitimate. Therefore it is unsurprising that of six Project North objectives, three exactly mirrored the client company objectives (for example, "Confidently in Control").

Social constructivism emphasises that once social structures are constituted, they constrain actors' choices to the limits of such structures (Boudourides 2003). Social structures have the best hold on actors when they seem to be rooted in the natural order; however, this was not the case here. The client redefined the project environment mostly after the contract was signed (it should be noted that the client changed the environment, not the contract) to carry their view of delegated legislation; these changes flowed from their Board and shareholders to permeate the organization and the Alliance.

Generally legitimacy is constructed retrospectively: an action or behaviour is examined post-facto against cognitive and/or sociopolitical criteria (Brunsson 2007). However, in this project legitimacy was a prerequisite, an in-project imperative and, for the individuals involved in particular, a requirement for their careers after the project, particularly as the project had already failed twice. Having received the endorsement from the client's parent company to proceed with Project North V3, the legitimacy-resource positive-progress relationship was especially critical. Given that the client's board had already shown their willingness to shut down the project if they were not satisfied with proceedings, this attempt needed to demonstrate that it was engaging in those processes that were considered legitimate. This included not only abiding by the rules and espousing the endorsed norms and values, but also building a project management team that had credentials and industry competence and operated in a low-risk manner.

The client's board were uncertain about the project's previous business model of a single major contractor sub-contracting work out. The board members believed that this would result in poor controls, including diluting the standard of work, making accountability ambiguous, creating poor project management reach to site and leaving the structure open to abuse particularly through scope creep.

To gain legitimacy the engineering specialist company inserted its own definition of a legitimate business model, a manipulation strategy of legitimation highlighted by Oliver (1991). They proposed an Alliance of three contractors, all reputable and specialists in their own fields (engineering, civil construction and mechanical construction), all reporting directly to the client through the Alliance Board, on which all members of the Alliance had a seat.

1.7 The Researcher's Role

The researcher was employed by the project director as a consultant to this project between March 2010 and August 2012. The researcher's role was to provide strategic advice on non-financial risk and to develop and implement a best-practice model for an organisation structure and processes for the working of the Alliance Board and PLT. To be able to undertake this role the researcher had open access to all project information. The researcher also collected data that included individuals' personal information, such as psychological, interest and preferred work environment profiles, team characteristics, team fit and climate/culture surveys. This access was (and continues to be) protected by a significant *commercial in confidence* contract between the researcher and the Alliance group. The researcher sought and received permission from the owners to use the data, now de-identified, in the research.

The opportunity to use the researcher's involvement in this project for this study was twofold. First, there was a chance to study the elites and reduce the political-ethical problem of solely doing research downwards (Alvesson 2003); and second, workplace ethnographies are usually carried out among blue-collar workers, not executives. There are a number of observational studies of senior executives en masse (Rosen et al. 2009), however, these studies of executives, they are usually sterilised interviews rather than boardroom meetings and day-to-day, executive-to-executive interaction (Alvesson 2003).

The researcher has tried, as Alvesson (2003) suggests, to avoid their personal-political tastes in considering and developing themes from empirical material and interpreting them broadly. The fact that the researcher was both a researcher and actor in this case is addressed in detail in Chapter 3 – Research Design and Methodology.

1.8 Structure of the Thesis

This thesis is presented in five chapters including the Introduction.

Chapter 2 provides a review of the relevant literature on selection in project teams, and provides both a context and an identification of a gap in the literature. Two broad areas of research are investigated within the context of people-selection, including in a project environment. The first area looks at the context in which these decisions are made; in this case a project context further defined in that it is a single case of an alliance structure in a mega-infrastructure project in Australia. The second area looks at process, and at processes within processes; in particular, it examines decision-making within the selection process of the PLT. This context and these processes are defined by the research question and have critical impact for both the scope and the research methodology of the study. Relevant existing literature pertaining to these elements is surveyed in this literature review.

Chapter 3 explicates the research design and methodology and illustrates why they are appropriate for exploring the research question that is at the centre of this study. This study is positioned in the qualitative genre and employs retroductive analysis (similar to a retrospective critical-incident approach) and ethnographic methods. These methods were selected due to their capacity to facilitate exploratory studies within real-world environments, making them appropriate to this research.

The research question asked *what factors influence the selection decisions for leadership teams in alliance mega-infrastructure projects* and looked to thicken the descriptions of these influencing elements as a contribution to the overall research in a number of fields; for example, people-selection and decision-making in specific contexts.

Chapter 4 examines the findings of the of the three primary research sources: the post-project interviews, the in-project interviews and discussions, and the content analysis of data, both that in the public domain and that gathered throughout the researcher's time on the project. In accordance with the primary research question, the chapter examines the factors influencing the selection of those who initially occupied the six positions on the PLT. As the study is retroductive, the researcher is left with post-facto rationalising of a known result (that is, who was selected for the PLT).

The chapter further develops, from a structural perspective the project environment that influences the behaviour of all stakeholders and ultimately underpins the selection decisions. The Alliance ideal is reviewed and the Alliance's opportunity to make decisions, specifically on the selection of the PLT members, is examined through the lens of a highly controlling, non-empowering client. Finally, four broad themes - (i) Power and Control, (ii) Project Knowledge Management, (iii) Legitimacy and (iv) Relationship Capital - are considered in depth as elucidated the analysis of the research data.

Chapter 5 brings an account of the dynamic context and fluid process of decision-making in people-selection that had hitherto been unavailable. It gives case-specific insights of how individuals and groups use their power to create legitimacy in their decisions. The findings of this study are synthesised in this chapter into a concentrated account of decision-making for the selection of people into the six positions on the PLT.

The researcher concludes that although the evaluation of the data in this study is from a unique setting, it nevertheless brings to light a set of concepts that provide explanations of the process of selection decision-making. It is suggested that the exposition, particularly of the decision-making concepts, may also provide a fruitful opportunity for future study for researchers interested in socially constructed decision processes in other subject areas.

1.9 Summary

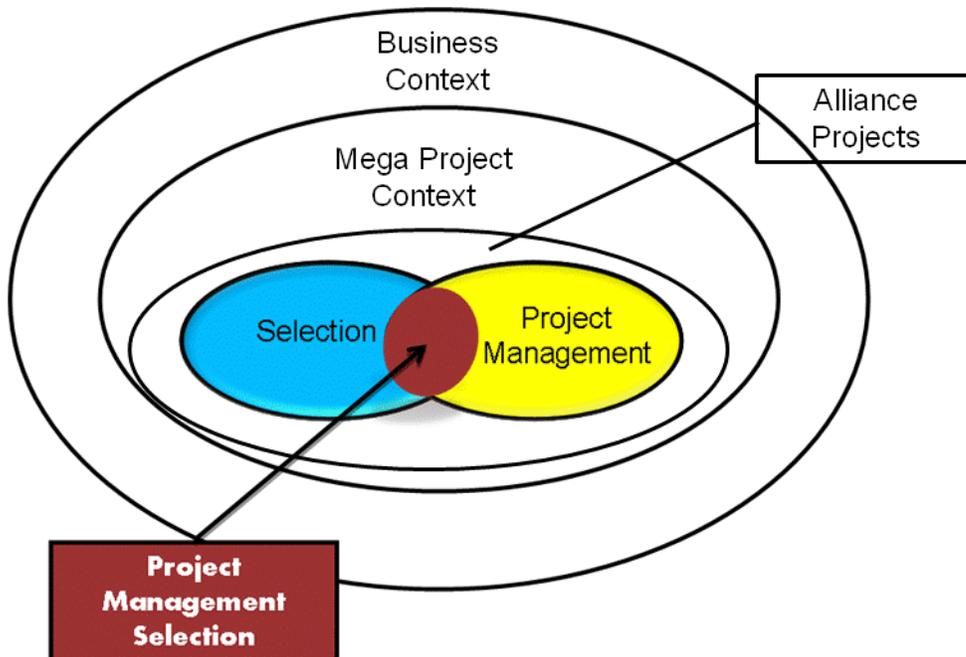
This thesis is a retroductive analysis using an ethnographic method to study both the context and process of selection decision-making to appoint candidates to a leadership team in an alliance mega-infrastructure project in Australia. The study aims to assist in filling the gap in the research that exists for interpretivist research undertaken on the in-practice decision-making in the selection of project leadership teams. Analysis of the data collected examines context in both circumstance and structure as antecedent conditions for decisions. This is particularly apt in this study as context, in part at least, shapes how people gain positions of influence and respond to influence in a unique setting. This study shines a light on the real-world practices of selection in these specific environments and gives some insight into their success (or otherwise).

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

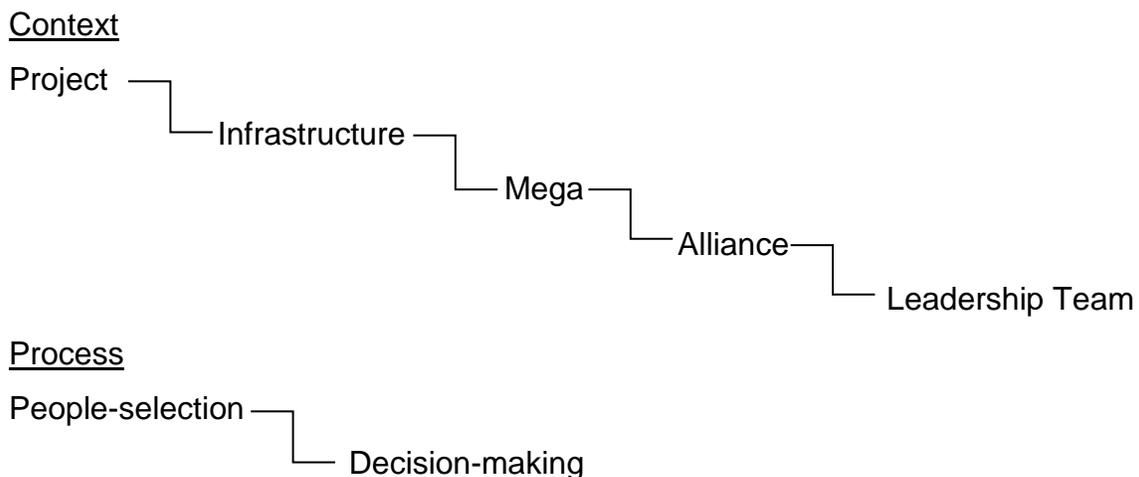
The purpose of this chapter is to review the relevant literature on the selection of project teams. The review provides a context and gap identification; however, this study is not literature-centric. As this study examines only one case, the findings and (as stated in section 1.2.1) conclusions are more organisation- and context-centric. Hence, there is the need in this literature to also address broader areas of context, such as alliance structures. The illustration below identifies the scope of the literature review. The illustration is offered as a heuristic device to conceptualise the scope of the review; it is not meant to reflect the total complexity of how these concepts relate to each other. Those associations relevant to the research question will be developed in chapter 5.

Figure 2.1 Literature review concept map



The research investigates two broad areas: *process* and processes within processes, in particular the decision-making process within the selection process; and the *context* in which these decisions are made. Figure 2.2 provides a schema of the elements contained in this review of the context and process in the selection of key people for leadership teams in a mega- infrastructure project.

Figure 2.2 Literature review context and process schema



2.2 Project Management

The context of this case study is an industrial project environment, specifically in construction. Consequently, the first area explored in the literature is why organisations use project management and what its benefits are. In the construction industry project work is the normal mode of organisation (Bresnen et al. 2003). Construction work is characteristically project-based and site-specific. The traditional success criteria of meeting outcome, cost and schedule constraints are no longer considered adequate (Beth 2001). These criteria point to the unitary, narrow-skilling, mechanistic and limited output orientation of a project-based approach.

2.2.1 The Changing Project Management Paradigm

A paradigm in project management has two key drivers: (1) the move by many businesses to organise their work in a project structure and (2) the explosion in technology. A subtext of these key drivers is globalisation and the multi-site, multi-discipline endeavors common in project management today. When the opportunity to work with multiple partners to achieve business outcomes is considered as well, the traditional way of defining and managing projects has serious limitations (Beth 2001).

Project management theory remains stuck in the 1960s time warp (Morris & Jamieson 2005) and the underlying theory of project management is obsolete (Koskela & Howell 2002). These perspectives suggest that understanding the implications for the functioning and consequent success of multidisciplinary project teams highlights the critical need to reconceptualise the boundaries of project teams (Ratcheva 2009).

2.2.2 Project Management and Value Co-creation

High-value project outcomes have been defined mostly in financial terms; for example: 'the benefit is the net present value of the project, discounted for risk' (Turner & Müller 2003, p. 2). However, the Project Management Institute identified and quantified project management's value to the organisation in broader terms (Thomas & Mullaly 2008); an example would be the inter-project transfer of knowledge. Project management knowledge assets alone contribute to both the tangible and intangible outcomes of project management practices and clients (Walker & Christenson 2005, p. 276); however, the embodied in the project's people is still seen as an ephemeral outcome.

Normann's (1991) view of value-creation is that a company's task is not to create value for its customers but to mobilise customers to create their own value from the company's offerings. This moves away from the traditional industrial output or product-centric view of the customer relationship towards considering it a facilitation or input to customers' value-creating process. Ramirez (1999) supports this position, stating that value is not simply *added* but is mutually *created* and *re-created* among actors. Most importantly, he advocates that this *value* cannot be reduced to a single metric. Ramirez summarised his two views of value as shown in Table 2.1.

Table 2.1 Two views of value production

Industrial view	Co-production view
Value creation is sequential, unidirectional and transitive, best described as <i>value chains</i> .	Value creation is synchronic and interactive, best described as <i>value constellations</i> .
All managed values can be measured in monetary terms.	Some managed values cannot be measured or monetized.
Value is added.	Values are co-invented, combined and reconciled.
Value a function of utility and rarity.	Exchange the source of utility and rarity.
Values are <i>objective</i> (exchange) and <i>subjective</i> (utility).	Values are <i>contingent</i> and <i>actual</i> (established interactively).
Customers destroy value.	Customers (co-)create values.
Value is <i>realised</i> in transactions, and only for the supplier (event-based).	Value is co-produced, with customers, over time – for both co-producers (relationship-based).
Three-sector models are pertinent.	Three-sector models are no longer pertinent.
Services are a <i>separate</i> activity.	Services are a framework for all activities considered to be co-produced.
Consumption is not a factor of production.	Consumers are managed as factors of production (assets).
Economic actors are analysed as holding one primary role at a time.	Economic actors are analysed as holding several different roles simultaneously.
Firm and activity are units of analysis.	Interactions (offerings) are units of analysis

(Ramírez 1999, p. 61)

This literature can be summarized as contending that if the reason for undertaking a project is to progress the value of the organisation, all stakeholders should consciously and collectively take a broader view of value and the value co-creation process before, during and after the project initiative.

2.3 Alliance Structures

The alliance context is a specific arrangement and environment in which projects are undertaken. As “alliance” is often very broadly defined it is important to develop a definition that gives context and structure to this study. This section gathers many of the perspectives on the term from the literature and gives rise to a working definition for this case examination.

Mutual support for survival, bonds between families (including marriage) and military arrangements are all familiar concepts of alliances. The term “alliance” suggests two or more parties that have a close relationship due to similarity or common interest. Four key issues can be synthesised to form the core of alliance arrangements: scope of action, limits or boundaries of input, value creation and stability procedures. These issues are discussed in further detail below. Although Koleva et al. (2002) suggest that 'joint ventures and licensing arrangements are the two most common examples of alliances' (p. 3), there is a need for clarity in the distinction between alliances and other forms of multi-organisation collaboration, in particular joint ventures.

2.3.1 Defining Alliances

In a business context alliances are purposive relationships between independent organisations (Franco & Haase 2015; Mohr & Spekman 1994). Being formed for a purpose, however, does not correlate to a *common* purpose although Mohr and Spekman (1994) do suggest that the organisations need to share compatible goals. They also emphasise the characteristics of mutual benefit and dependence. Supporting this view Ramu (1997) asserts that an alliance is about bringing together specific skills and resources without the complications of a merger. Ruma (1997) suggests a notable characteristic in that alliances are formed by *rival* companies. These perspectives might give the appearance that alliances are simplistic, commonsense arrangements; however, Bharat and Khanna (2000) point out that they are, in fact, complex organisation forms, viewed by some as incomplete contracts and fraught with ambiguity. Cullen et al. (2000) posit that the difficulty is not in bringing the parties together as an alliance but in managing them throughout the endeavour; specifically, the management of the soft side of the association – or, in other words the development and management of relationship capital. Table 2.2 gives a number of characterisations and contexts of alliances from the literature.

Table 2.2 Alliances defined - characterisation and context

Characterisation	Context	Reference	Applicability to mega-projects
<p>'A mutual decision adopted by two or more independent firms in order to trade or share resources for mutual benefit'</p>	<p>Journal article of research conducted by Mario Franco, an assistant professor of Entrepreneurship and SME Administration, Department of Management and Economics, Beira Interior University, Portugal and Heiko Haase, Full Professor of Entrepreneurship and Innovation Management, Department of Business Administration, University of Applied Science Jena, Germany. The article focuses on the importance of interfirm alliances for sustainable businesses' development and success. Their research is fundamentally focused on SMEs.</p>	<p>(Franco & Haase 2015, p. 172)</p>	<p>In its generality the characterisation is applicable to mega-project, however as the study concentrates on SMEs the contextual gap in the research falls short.</p>
<p>'Strategic alliances can be defined as purposive strategic relationships between independent firms that share compatible goals, strive for mutual benefits and acknowledge a high level of mutual dependence'</p>	<p>Journal article of research conducted by two authors: a Professor of Marketing, University of Montana, USA, and the Taylor Murphy Professor of Business Administration Emeritus, Darden School of Business, University of Virginia, USA. The articles focus is on strategic partnership success and communication</p>	<p>(Mohr & Spekman 1994, p. 135)</p>	<p>The article's focus is on the characteristics of partnership success without any reference to contexts outside of manufacturing. It looks for prescription of behaviours but does not review the reality of their implementation.</p>

Table 2.2 Alliances defined - characterisation and context (Cont'd)

<p>'Alliances are complex organizational forms that are usually viewed as incomplete contracts. They typically involve the transfer of know-how between firms, a process that is fraught with ambiguity... Detailed interactions between the alliance partners can rarely be fully prespecified'</p>	<p>Journal article of research conducted by two authors from the Harvard Business School, USA. They investigate whether firms learn to manage inter-firm alliances as experience accumulates. They use contract-specific experience measures in a data set of over 2000 joint ventures and licensing agreements, and value-creation measures derived from the abnormal stock returns surrounding alliance announcements.</p>	<p>(Anand & Khanna 2000, p. 295)</p>	<p>As contact increases between parties, so does accumulated knowledge help the management of alliances. Where the premise of the article may be valid, the context in which the alliance is working is not given relevance.</p>
<p>'A firm will form an alliance with another firm in order to bring together specific skills and resources in such ways that may complement each other, without the complications and expenses associated with a merger ...SBAs are formed by rivalling companies to increase their respective capabilities and competitive positions in non-competing lines of markets.'</p>	<p>A book published by Sage Publications the author of which is a Professor at the Indian Institute of Management at Bangalore. The book examines alliances from perspectives of production, pricing, market structure, size distribution of firms, business economics and marketing.</p>	<p>(Ramu 1997, p. 204)</p>	<p>This book examines alliances from a complementary skills perspective. The issue of rival companies working together in non-competing lines in the market narrows the focus of the book as there are other reasons for alliances to be formed.</p>

Table 2.2 Alliances defined - characterisation and context (Cont'd)

Characterisation	Context	Reference	Applicability to mega-projects
'In strategic alliances, the soft side of management refers to the development and management of relationship capital. In addition to making the investment of financial capital, partner firms ... must invest in relationship capital ... It involves the pattern of interaction between partner firms that facilitates and allows for the effective functioning of the alliance on a day-to-day basis. It is through relationship capital that the alliance is actually enacted and implemented.'	Journal article of research conducted by two authors from Washington State University, Pullman, WA, USA and one from Waseda University, Tokyo, Japan. Against an international backdrop, the article argues that the success of international strategic alliances requires attention not only to the hard side of alliance management (e.g., financial issues and other operational issues) but also to the soft side.	(Cullen et al. 2000, p. 224)	The article is a high-level view of the 'soft side' of the working of alliances. It concentrates mostly on relationship capital and not on other latent factors that may also be called 'soft'. In meg-projects hard and soft factors should be examined in the dynamic of the functioning of the alliance.

Significantly, these characteristics highlight noteworthy concerns about the workings alliances and decision-making as a process, and particularly about those who makes those decisions and their impact and outcomes. Alliances are 'complex organizational forms'; 'viewed as incomplete contracts'; a 'process that is fraught with ambiguity'; and 'detailed interactions between the alliance partners [that] can rarely be fully prespecified' (Anand & Khanna 2000, p. 295). Alliances are 'qualitatively different from [joint ventures]' in that they are; 'formed by rivalling companies' (Ramu 1997, p. 204); and, characteristically there is 'relationship capital [in] that the alliance is actually enacted and implemented' (Cullen et al. 2000, p. 224).

2.3.2 Differentiating between Alliances and Joint Ventures (JV)

Strategic business alliances (SBAs) are qualitatively different from JVs (Ramu 1997). They have some common elements, including two or more organisations joining together for a common purpose and the management imperative to build trust. The remainder of this section considers how they differ.

The point of trust (or potential lack of it) is a nexus for the parties to choose either an alliance or a JV as the format for the collaborative activity. A new delivery mode, called 'Integrated project delivery' (IPD) (Lianying et al. 2016) does rely on high trust-based collaboration among project parties and in doing so goes some way to bridge one of the critical differences between JV's and alliances. The JV involves the creation of a new entity, and the documented JV agreement is tightly constructed and contractual, with clear legal boundaries that define equity, apportion risk and reward up front, clearly define the extent of input knowledge and resource and legalise the ownership of newly created knowledge. This reflects the strong involvement by company boards in JVs (Reuer et al. 2014). In contrast, alliance management structures by nature depend on strong relationships and trust. They are exclusive partnerships with the boundaries defined by partnering organisations; significantly, they may not have any formal legalised document to support the cooperative. They are seen as incomplete contracts for this reason and because neither partner is necessarily required to invest equity in a newly formed separate entity. The participants pursue an objective while remaining independent organisations. Non-equity alliances are more effective for discovering knowledge and common language, and for exchange of information and knowledge.

Table 2.3 - Synopsis of differences between alliances and joint ventures

	Alliances	Joint ventures	Applicability to mega-projects
Definition	An exclusive partnership	A company owned by two or more independent companies.	Either or both
Purpose	To some extent, partnering firms have a common purpose.	The JV has a purpose; parent firms' strategies might diverge.	Either or both
Boundaries	Defined by partnering firms.	Clear, legal boundaries.	Either or both
Relation to knowledge	Alliances are formed to learn from the partner. Knowledge is located in partners.	JVs are formed to capitalise on knowledge in parent firms and to generate knowledge.	Either or both
Management imperative	Avoid learning races, build trust.	Construct contracts, build trust.	Mainly constructing contracts
Management structures	Incomplete contracts that depend on the relationship.	Equity ownership.	Mainly equity owned
Management of knowledge	Non-equity alliances are more effective for discovering knowledge and common language, and for exchange of information and knowledge.	Best structural form to legalise ownership of newly created knowledge.	Very legalised

Source: Researcher's synthesis of the literature

One of the most attractive characteristics of an alliance structure is the flexibility it provides in operations without being bound to a legal contract. For example, a company can grow faster by using a partner's distribution networks and taking advantage of a good brand image. Such partnerships can help to lower costs, especially in non-profit areas like research and development. Sharing knowledge, skills, brands, market knowledge, technical know-how and assets results in a pool of resources that is more valuable than a simple combination of the individual resources.

Relational capital based on mutual trust and interaction at the individual level between alliance partners creates a basis for the transfer of learning and know-how across the exchange interfaces (Kale et al. 2000). An issue with alliances centre on the difficulties of the informality of the cooperation settings. Alliances are problematic when decision-making powers are distributed unevenly; for example, the weaker partner might be forced to act according to the will of the more powerful partners. In a strategic alliance the partners must share skills and know-how. This can be critical if business secrets are included. Agreements can protect these secrets but the partner might not be willing to stick to such an agreement.

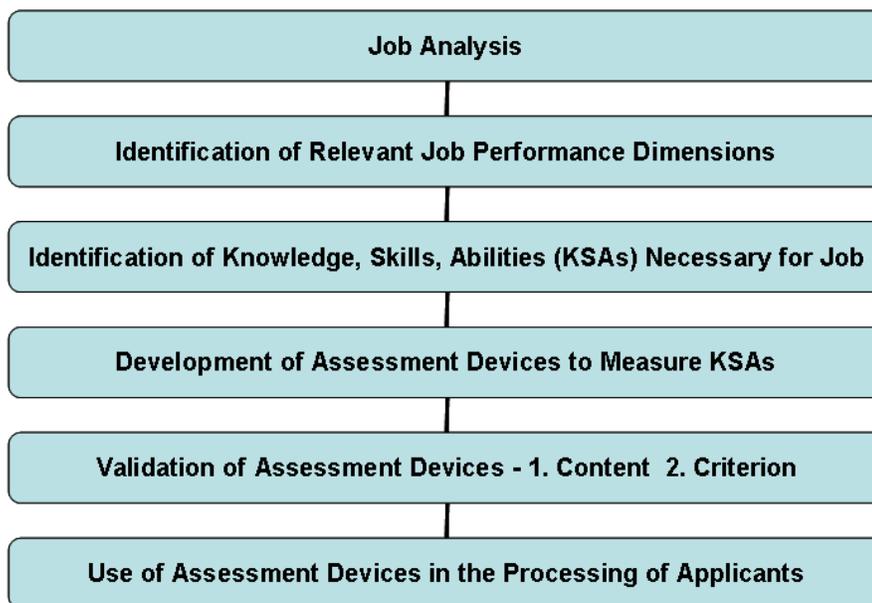
2.3.3 Summary of Alliance Structures

This synthesis of the literature suggests that working in an alliance structure offers great potential advantages: transfer of know-how, shared costs across organisations and mutually beneficial outcomes. For these advantages to accrue there must be shared compatible goals, openness and trust. Unlike a JVs an alliance allows the individual parties to keep their independence as organisations and still enhance their respective enterprises through the allied project or activity. These positive characteristics and advantages help define the opportunities that are presented in this case.

2.4 People-selection

The core of the research question is people-selection. This section will examine the literature to gain a focus on the traditional and contemporary, the formal and informal, and the legitimate and less purist aspects of selection. As set out in Figure 2.3, Gatewood et al. (2016), documented a stepped approach in the development of a human resource (HR) selection program; this will be used as a traditional selection method from which to examine other selection approaches.

Figure 2.3 Steps in the development of a selection program



(Gatewood et al. 2016, p. 11)

Gatewood et al.'s (2016) approach is the most common practice used by HR practitioners in people-selection. It has both qualitative and quantitative research to support its legitimacy and a positive track-record of real-world success to champion its continued use (Sanchez & Levine 2012). The steps in Figure 2.3 show the first critical step of the process as job analysis: 'a purposeful, systematic process for collecting information on the important work-related aspects of a job' (Gatewood et al. 2016, p. 245). There are, however, alternatives to this step. Emerging trends in HR include personality-oriented work analysis, team and cognitive task analysis and strategic competency modeling. Many organisations have incorporated competency modelling (CM) instead of job analysis into their HR practices (Gatewood et al. 2016).

2.4.1 Competency Modelling in People-selection

Unlike job analysis (JA), CM focuses on overall goals and is less rigorous in data collection, detail, documentation and assessment of reliability (Schippmann et al. 2000). Competencies are defined by Bartram (2005) as 'sets of behaviors that are instrumental in the delivery of desired results or outcomes' (p. 1187). This outcome focus allows a clearer understanding of CM and why a purely commercially oriented organisation would have a strong level of comfort with, and be predisposed to, this approach in the selection of its key personnel. However, while it has high face validity, this is 'not a form of validity in a technical sense' (Gatewood et al. 2016, p. 146). CM also allows for competencies that all employees should possess in addition to their job-specific knowledge, skills and attributes. These consist of attributes that cut across tasks and are linked to business strategies and broader organisation culture.

Campion et al. (2011) list ten key differences between CM and JA. First, executives pay more attention to competency modelling. Second, CM is often intended to distinguish top performers from average performers. Third, CM often includes descriptions of how the competencies change or progress with employee level. Fourth, the knowledge, skills and attribute are usually linked to the business objectives and strategies. Fifth, CM is developed top down, rather than bottom up, as is job analysis. Sixth, CM may consider future job requirements either directly or indirectly. Seventh, CM is usually presented in a manner that facilitates ease of use. Eighth, in CM a finite number of competencies are typically identified and applied across multiple functions or job families. Ninth, CM is used actively to align HR systems. Tenth, CM is often more of an organisational development intervention that seeks broad organisational change, as opposed to a simple data-collection effort (Campion et al. 2011). As a consequence of these differences, CM is seen to have wider benefits for the organisation than JA.

Within competence models, behavioural competency-based measures underpin levels of performance; consequently, when they are used in the selection process, they have the potential to predict future performance. Following Fowler et al. (2000), competence in the case under research is used in its broadest terms to include input, process and output perspectives. One of the limitations of behavioural-based competency constructs is that they are dynamic and sometimes difficult to identify (Fowler et al. 2000).

2.4.2 People-selection and the Decision-making Process

Based on Simon's seminal work on bounded rationality in decision-making in the 1980s and 90s (Simon 1985, 1993, 1999), in the selection process a rational decision invariably implies choosing the best person possible for the job, as well as using well-proven scientific assessment techniques that ensure an unbiased and impersonal decision.

If this is not done and the decision is based on some form of personal attachment, efficiency will suffer (Blau & Meyer 1987). Therefore there seems to be no place in the discussion of rationality for employing a person due to relationship.

Given the 'best for project' mantra, the bounded rationality perspective and the use of egalitarian norms, the question is, is equality relevant for legitimacy as well as justice in selection? The egalitarian view is that selection criteria are unjust when, without justification, some applicants face tougher selection criteria than others (Clayton 2012). Clayton (2012) elaborates on just criteria: 'The question of justice: What are the conditions the fulfillment of which renders a selection procedure fully just: that ensures that everyone fully enjoys the treatment [they] are due?' (p. 10). When equality is stressed, even if a hiring decision is permissible there remains a further morally relevant question: whether the selectors' deliberations or motives are acceptable. A complete answer to that question assumes that, ideally, selectors are moved by the attitude of equal respect toward different individuals (Clayton 2012). This leads to the question of how the selectors deliberate. Conceptualising selection as a series of steps disguises the ongoing practical deliberations in the decision-making process (Bolander & Sandberg 2013). Bolander and Sandberg (2013), assert that these deliberations involve 'four interrelated, discursive processes: assembling versions of candidates; establishing the versions of candidates as factual; reaching selections decisions; and using selection tools as sensemaking devices' (p. 285).

Bolander and Sandberg (2013) attempt to look deeper into the selection decision-making process; however, their rationale is based on the assumption that there is a conscious, overt deliberation that allows initial agreement and/or disagreement on all or part of the candidates' attributes for the position. Such deliberation harks back to some elements of the egalitarian view of selection.

The presumption that there is in fact any deliberation or, alternatively, that one party takes on the sole decision-making process and imposes their decision on all other parties is a significant area for examination. The use of selection tools as sense-making devices (Bolander & Sandberg 2013) to aid selection decisions implies that it is theoretically possible to predict performance on the job with near-perfect precision. Nevertheless, some people 'have an inherent resistance to analytical approaches to selection because they fail to view selection as probabilistic and subject to error. Another [reason for not using selection aids] is the implicit belief that prediction of human behaviour is improved through experience. This myth of expertise results in an overreliance on intuition and a reluctance to undermine one's own credibility by using a selection decision aid' (Highhouse 2008, p. 333).

The discussion of the literature above highlights the abundance of frameworks and approaches through which the research data can be explored.

2.5 People-selection in a Project Environment

Figure 2.2 identifies the linkages in both context and process. This section examines the people-selection process in the context of the project environment to identify issues that may arise in this specific context. Probert (1997) states that the project management system or methodology is given higher priority than the selection and support of the project management team. 'It is untrue to say that total [project] failure is guaranteed in the other case, [the other case being a focus on project management systems or methodology] but it is much more likely' (Probert 1997, p. 142). Recruitment and selection in projects can be *ad hoc* with the emphasis more on recruitment than selection (Lockyer & Scholarios 2007).

To assist project-based businesses the British Psychological Society and the Chartered Institute of Personnel and Development defined a best-practice approach to promote objectivity in selection through detailed taxonomies of job behaviours and techniques. These taxonomies focused on the use of project management tools, such as scheduling and cost estimation and tracking software. Behaviours covered issues where conflicts were most likely to occur: schedules, administrative procedures, personality conflicts and project priorities. Leadership was stated as one of the competencies, but the approach acknowledged that leadership means different things to different people. 'The overall findings of this paper imply that technical project management tools and methods are so well developed and widely used that now it is time to turn the focus on developing leadership skills' (Hyväri 2006, p. 223). The best-practice approach may act as a guide for trades and manual-labour roles in projects however little has been done on technical competencies and leadership in project management (Hyväri 2006).

As human resources practices, such as selection systems, should reinforce the business's core ideology, it is understandable that the selection process in a project environment goes far beyond the fit between person and person (Morley 2007). Competency-based measures are increasingly being recognised as the best way to select and professionally develop project managers, particularly in the construction industry (Ahadzie et al. 2008). Functional/technical competencies measure performance against output-based criteria. As stated, in Section 2.4.1, behavioural competency-based measures underpin levels of performance; and consequently, when used in the selection process, they have the potential to predict future performance.

However, Zingheim et al. (2003), highlight the similarity of definitions of competence across organisations and draw attention to the loss of competitive advantage by not defining the uniqueness of different positions in different organisations. The reason that competency-based approaches have become widely accepted in project management is their strategic importance. The iron triangle - on time, on budget, on specification - as the only measures of project performance perpetuates the myth of projects being one-off, short-term activities with no opportunities to develop individual career and organisation capability. This perspective (myth) was discussed earlier (section 2.2.2) from the standpoint of value co-creation and will be examined in detail in the findings in chapter 4. Competency-based measures support continuous performance improvement and thus contribute to superior performance levels (Bass 1990).

2.5.1 People-selection for Project Teams

Relational qualities need to be included in selection criteria to ensure that project partners accept collaborative arrangements around joint risk management (Rahman & Kumaraswamy 2005). With selection systems reinforcing the organisation's core ideology (Collins & Porras 2002), the selection process itself can be a major source of value. Most projects are seen as one-off endeavours and consequently a number of roles, particularly at a senior level, are limited to only a few positions (Bass 1990).

It is very cost-effective to purchase off-the-shelf instruments for selection as long as the predictor instruments have been strongly validated as generalisable to the knowledge, skills and attributes for the role being selected (Wienclaw 2013).

Other than the debated premise that projects are one-off endeavours and consequently may be subject to less investment in in-depth selection practices, the literature does not differentiate between people-selection in a project environment and in any other situation.

2.6 Power and Control

'Power aims to regulate free and autonomous actors who are acting on the basis of different interests, motives and ideologies, but it does not aim to strip the individual or collective actors of their capacity for free action'

(Braude 2010, p. 113).

An examination of leadership selection decisions in project teams cannot be complete without discussion of the expertise that is embodied within that team. Expertise is a source of legitimate power (Raven and French, 1958). However, power does not stop with explicit expert power. 'The execution of coercive and legitimate power by an authority assures cooperation and prohibits free-riding' (Hofmann et al. 2017, p. 1)

This study considers what factors influence selection decisions in senior project leadership teams. The nature of *influence* is the capacity to have an effect on someone or something. This capacity is power, and 'is not a single entity. It represents a cluster of concepts' (Braude 2010, p. 3). The seminal work of Raven and French in the late 1950s investigated the effects of legitimate power as compared to coercion. They worked from earlier research that had defined five bases for social power: *reward power*, based on the individual's perception that another individual can mediate rewards for them; *coercive power*, based on the individual's perception that another individual has the ability to mediate punishments for them; *legitimate power*, based on the individual's perception that another individual has a legitimate right to prescribe behaviour for them; *referent power*, based on the individual's identification with another individual; and *expert power*, based on an individual's perception that another individual has some special knowledge or expertise.

Raven and French (1958) then compared these types of power according to domain, degree of dependence of the given type of power upon the individual, importance of publicity in contributing toward influence, and effects of a given type of power on the continuing relationship between the individual and the agent (Raven & French 1958, p. 83).

These early explanations do not define the actors in any specific form, although they establish a hierarchy with the powerful individual, or agent, having real or perceived authority over the other individual. In recent times this authority has been described 'as processes or individuals which organize the cooperation in a community by an assigned social position that allows to create and maintain environments and thereby influence the behavior of individuals' (Hofmann et al. 2017, p. 1). These authorities can be a government, statutory and regulatory bodies, professional organisations and businesses. Through the use of legitimate power and coercive power these entities have the means to encourage cooperation. Cooperation using legitimate power comes from the authority using its position, expertise and/or policy to have others identify with it, whereas the authority uses coercive power in the form of control, monitoring and heavy punishment (Hofmann et al. 2017).

Perceptions of power shape the way businesses and people develop and pursue their goals and objectives. Assuring cooperation and prohibiting performance deficit are benefits of an authority executing coercive and legitimate power. However, individuals' perceptions of the businesses use of power affect the way they think about that business in terms of how it uses power and the impact of that on the team. For example, the three enabling factors for project-team knowledge management - *team autonomy*, *performance measurement and incentive system* and *continuity* – contribute to a team's stability (Eppler & Sukowski 2000).

2.6.1 Power and Selection

In terms of selection of project teams, particularly the project management team, the perception of the authority's influence through their use of their power, whether legitimate or coercive (or both), may elicit cooperation however, the underlying cognition may differ. 'The perception of these powers wielded by authorities stimulates specific cognitions: trust, relational climates and motives. Findings reveal that coercive power increases an antagonistic climate and enforced compliance, whereas legitimate power increases reason-based trust, a service climate and voluntary cooperation' (Hofmann et al. 2017, p. 1). This rationale offers the intuitive and reassuring insight that enforced compliance is less effective than voluntary cooperation.

2.6.2 Power, Politics and Trust

Landells and Albrecht (2017) develop the work of Raven and French by researching political behaviours and describing them in terms that relate to five established bases of organisational power: connection power, information power, coercive power, positional power and personal power. Rosen et al. (2009) define organisational politics as 'activities that are illegitimate, self-serving, and often harmful to the organization or its members' (p.203). However Landells and Albrecht (2017) suggest that organisational politics can be seen as 'a useful strategy that helps to get things done (strategic), and as central to organizational functioning and decision-making (integrated)' (p.41). There are a number of beneficial outcomes of these political power behaviours including improved decision-making, improved communications and the achievement of organisational goals (Landells & Albrecht 2017). This approach highlights positive aspects of organisational politics which is usually viewed in a negative light; these positive aspects are worth taking into account when considering influences on decision-making.

'Trust is regarded as a mediator between power and cooperative performance. Trust and power are considered to be two necessary mechanisms for promoting cooperation among construction partners.' (Lu & Hao 2013, p. 522). Further research suggests that the type of power used will have a significant impact on the outcome. Although Lu and Hao's (2013) research is undertaken in a Chinese context, it is relevant in that the research framework is similar to the case under study: a supplier-client relationship in an industrial setting. Their results reveal that both trust and coercive power improve client and supplier integration. However when trust is low, coercive power reduces internal integration. Contrary to conventional wisdom that coercive power hinders cooperation, an earlier study found that coercive power improves integration, with or without the presence of trust (Yeung et al. 2009). It is also true that legitimate power can have an amplifying effect in an antagonistic climate and a strengthening effect on enforced compliance. However, solely reason-based trust, but not climate perceptions and motives, mediates the relationship between power and intended cooperation (Hofmann et al. 2017). In addition, it is expected that whereas the individual who exercises legitimate power will become more personally attractive to another, the coercive power figure will be less accepted (Yeung et al. 2009).

2.6.3 Consequences of Exercising Power

Raven and French (1958) conclude that 'the net effect of non-legitimate and coercive influence may be an increased discrepancy between private and public opinion and behavior, with its resulting tensions' (p. 83). More than a half-century later, the research focuses less on the distinction between power, politics and influence and more on the perspectives of organisational politics according to Landells and Albrecht (2017).

Understanding power and its use in organisational contexts opens up the debate regarding positive and negative outcomes of political behaviour. It cannot be assumed that when two parties are talking, witnessing or engaging in behaviours relating to power politics they are cognitively processing the same phenomenon. Research by Reiley and Jacobs (2016) found that leaders' use of power, (expert, referent and reward) had the greatest influence on performance when the followers perceived these leaders to be more ethical.

Landells and Albrecht (2017) identify five kinds of organisational politics: build and use relationships; observe and interpret the decision-making context; manipulate and undermine others; control decisions and resources; and build personal reputation. Two characteristics of *control of decisions and resources*, are 'positioning yourself to control decisions' and 'disregarding others' advice' (Landells & Albrecht 2017, p. 50). This view strengthens the researchers' assertion that decisions are not always rational.

2.7 Legitimacy

The efficiency of a project team can be enhanced if all members trust each other (Chow et al. 2012). They identify that trust building mechanisms and trust expectations must be legitimately built through inter-relational trust-building behaviours, citing self-awareness, responsiveness and value congruency, as seen by the trustor, as criteria for legitimate trust. As stated in section 2.6.2, Yeung et al. (2009) note that individuals who exercise legitimate power will become more personally attractive to another. The link therefore between legitimacy, power and trust must be examined in any study of factors in selection decision-making, particularly the role that they play in alliances and mega-projects.

'Every authority system tries to cultivate a belief in its legitimacy' (Zelditch & Walker 2003, p. 219). Legitimacy is affected by internal power relations, in the sense that the ability to influence what is considered to be proper decision-making procedures and proper justifications for decisions is a fundamental source of power (Gutiérrez & Magnusson 2014). Both of these premises, cultivating a belief in legitimacy and the effect of internal power relations on legitimacy, are examined in the case under study, as they provide the context of the selection of the project leadership team (PLT). The literature is loosely bracketed by a dichotomy of precise definition of Government regulation and procedural justice on the one hand and the esoteric thought-world of individuals' rationales on the other. At the extreme of the individual's thought-world, legitimacy is in the eye of the beholder.

2.7.1 Characteristics of Legitimacy

As noted above, legitimacy is a concept meant to capture the beliefs that bolster willing obedience (Levi et al. 2009). Organisations need to gain legitimacy among external and internal stakeholders, and once attained it must be maintained and sometime repaired. Legitimacy is not directly observable; it is an abstract concept. Organisational legitimacy can be characterised in terms of social judgements and evaluated in terms of status and reputation. Evaluations of organisational legitimacy involve bounded rationality, along with cognitive and sociopolitical issues (Bitektine 2011). Legitimacy is a generalised perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions (Suchman 1995). The theme of the many definitions of legitimacy is that it is the relationship between what organisations say and what they do in the context of the environment in which they exist.

External actors need to have a belief or feeling that the organisation is worthy, effective, efficient, competent or even needed. Here again is the concept that legitimacy exists in the eye of the beholder.

There are three types of legitimacy: regulative, normative and cognitive (Scott 1995). *Regulative* is about complying with the laws of the land and the rulings of regulatory bodies, and being a good citizen. It indicates to stakeholders that the venture is acceptable even if little is known about how effective the rules are in meeting the desired end. Power based on *legal-rational legitimacy* remains the *sine qua non* of the rule of law. *Normative* legitimacy includes fair treatment of employees along with rationality, especially on a cost-benefit basis. It can be achieved through networks which mitigate the liability of newness and allow the recipient to piggyback on the endorsing organisation's legitimacy.

Cognitive legitimacy addresses widely held beliefs and taken-for-granted assumptions that provide a framework for everyday routines, as well as more-specialised, explicit and codified knowledge and belief systems. Actors learn more about their identities and what is expected of them (roles) and what the game is; hence cognitive legitimacy socially constructs reality for the participants. This is a summary of concepts from Zimmerman and Zeitz (2002, pp.418-21).

2.7.2 Legitimate, Not Legitimate

The discussion in the literature about legitimacy highlights a somewhat paradoxical theme in that there is a dichotomy between being legitimate or not, yet there are degrees of legitimacy. Zimmerman and Zeita (2002) suggest a threshold across which something is judged legitimate and once an entity has crossed that threshold, its legitimacy may be rated on a scale from low to high. However there is little discussion on what constitutes this threshold at the base level of legitimacy.

Even those decision-making approaches that have passed the legitimacy threshold do not have the same legitimacy. There is an extent to which people accept the decision-making approaches; in other words, legitimate behaviour for decision-making is socially constructed through interpretation. It is widely accepted in decision-making theory that, because of cognitive limitations and the nature of decision situations, it is not always possible for people to make decisions in a purely rational way. Informal approaches to decision-making, based on interaction and learning, are necessary in the presence of uncertainty. Different levels of decision-making approaches encounter different levels of acceptance in organisations; these levels determine whether they are seen as legitimate (Gutiérrez & Magnusson 2014).

One view of legitimacy has been that it operates largely at the subconscious or preconscious level, and therefore that there is little chance that organisations would be aware of it and/or use deliberate strategies to manipulate it (Suchman 1995). However, *legitimation*, according to Jackson and Klobas (2008), is a process that organisations use to ensure that knowledge is authorised by people or groups who have power, and that meanings are validated and accepted as 'correct' or 'standard' by others (Jackson & Klobas 2008, p. 331). Strategic legitimation is a process that deploys evocative symbols to gain support. The organisation can take proactive steps to acquire legitimacy by changing itself and/or changing the environment (for example, changing the organisations operating in it). According to Suchman (1995), there are three basic legitimation strategies - conformance, selection and manipulation. *Conformance*, as the name suggests, is achieved by actors conforming to demands and expectations; it requires the least external change. *Selection* involves some level of conformity yet allows the organisation to select its own operating environment.

Manipulation is about preemptive intervention, 'to develop bases of support specifically tailored to the distinctive needs of the organization' (Suchman 1995, p. 591). It is about redefining legitimacy - 'as the purposeful and opportunistic attempt to co-opt, influence, or control institutional pressures and evaluations' (Oliver 1991, p. 157).

2.7.3 Legitimacy in People-selection

When considering people-selection, what conditions need to be fulfilled to generate reasons to comply with or accept a selection decision – in other words, what makes people-selection decisions legitimate? There are two conditions of legitimate selection: procedural conditions of a selection policy have been decided and administered in the right way, and the decisions arising from the selection procedure is sufficiently just (Clayton 2012, p. 28).

Engholm (2001) asserts: 'Legitimacy is also assumed if applicants know that assessment methods are fair and just, and skills, knowledge and experience are the pivotal elements to selection decisions' (p. 2). He goes on to say that, 'if rational behaviour guides the selection process in an organisation, it shall also promote legitimacy ... and legitimacy is also assumed if fairness and equality in the selection and recruitment procedure is ensured' (p. 2).

2.7.3.1 Legitimacy in People-selection Decisions

The prescriptive literature on people-selection is mainly based on rational decision-making. Max Weber (2000) defines rationality as 'increased management control over and coordination of the workforce, detachment of personal feelings and sentiments from decision-making, clear set rules and objectives, focus on knowledge and expertise, and the absence of traditional, charismatic leadership' (p. 116).

Weber observes that modern organisations need to behave rationally to become more efficient and effective in an increasingly competitive capitalist market economy (Weber 2000). This goes to the essence of management credibility and meritocratic selection. Clayton (2012) suggests a flaw in this perspective: what he calls a 'stringency objection' that 'rests on a failure to distinguish between evaluating selection procedures from the perspective of justice and judging them according to the standards of legitimacy' (p. 10). He goes on to say that it does not follow that if a particular selection is unjust it is also illegitimate. A legitimate procedure gives rise to a legitimate decision but it does not follow that an illegitimate procedure gives rise to an illegitimate decision. Legitimacy is a less demanding notion than justice (Clayton 2012). Zimmerman and Zeita (2002) suggest that the concept, 'that legitimacy provides a basis for decision-making that is different from means-end rational' (p. 416) is key.

Rational and formal decision-making processes are seen as more legitimate however making decisions only by rational and formal approaches lacks flexibility (Gutiérrez & Magnusson 2014). Rational decision-making approaches might be considered appropriate in situations when the quality of information enables people to seek out alternatives, state clear criteria based on preferences and make an optimal choice. The assumption is not only that consistent choices will be made through a formal and hierarchical decision-making processes, but that these choices will maximise the value of the firm, through systematic assessments of alternatives in comparison to predetermined criteria (Gutiérrez & Magnusson 2014). Gutierrez and Magnusson (2014) further state that decision-makers deal with legitimacy by certain mechanisms that allow them to bypass approaches with high acceptance and legitimising decisions made using those with low acceptance. Legitimacy and how decision-makers deal with it, are key challenges for decision-makers (Gutiérrez & Magnusson 2014).

The research question asks for the factors that influence people-selection decision. In pursuit of legitimacy in people selection some constructs and consequences appear unavoidable. Brunsson states, 'Legitimacy is affected by internal power relations that allow some groups to influence what is considered proper decision-making procedures and proper justifications for decisions and by what is regarded as proper practices among external and internal stakeholders and by values rooted in a more general societal level'. (Brunsson 2007, p. 162). Therefore in examining the research question this review encourage a close look at the legitimacy of the decisions made through the prism of bounded rationality, along with cognitive and sociopolitical issues.

2.8 Project Knowledge Management (PKM)

The power perspectives included in the previous sections includes the concept of *expert power*, based on an individual's perception that another individual has some special knowledge or expertise (Raven & French 1958). The research question seeks to understand the elements of influence affecting the inputs to a selection decision. PKM is a key area of examination not only for its standalone impact in the project context but as a subset of power as identified by Raven and French (1958).

There is an increasing appreciation that knowledge is a key organisational asset. Normann's (1991) work (previously discussed in Section 2.2.3) cited his own perspectives of *knowledge* and *value*. *Knowledge*, he argues, can be tangible products, effective instruments into which past activities can be frozen and made available to actors for their present and future value-creating activities. However, physical products are not the only way; rather, people (as a result of education and experience), manuals, systems, language and culture also carry knowledge. The product itself is a knowledge-carrying component of the entire knowledge-driven reconfiguration process of value creation (Normann 1991).

The knowledge perspective here clearly supports the influence of PKM in the value-creation process in project environments. The benefits of knowledge management (KM) - cutting costs, reducing risk, preventing repeated mistakes, ensuring continuous improvement, safeguarding corporate memory, not 're-inventing the wheel', enabling quick response, facilitating the sharing of experience and fostering learning and favourable staffing - are well documented in the literature, particularly for project-based businesses (Eppler & Sukowski 2000; Hanisch et al. 2009; Owen et al. 2004; Pretorius & Steyn 2005; Rokooei 2015). Many studies emphasise that the capture and codification of knowledge through an information technology-based approach to PKM has limitations; for example, knowledge is often tacit and situated with particular social groups (Belout & Gauvreau 2004; Bresnen et al. 2003; Eppler & Sukowski 2000; Owen et al. 2004).

2.8.1 Project Knowledge Management (PKM) and Project Portfolio Management (PPM)

Hanisch et al. (2009) and Bresnen, Edelman et al. (2003) characterize projects as unique and temporary undertakings; this downplays the role of project portfolio management (PPM) and the significance of PKM to effectiveness and competitive advantage. PPM is used, usually in project offices, to centrally manage processes, methods and technologies to analyse and collectively manage current or proposed projects. PPM through inter-project, close-to-real-time PKM, gives organisations the flexibility to develop emergent strategies. This ability is a particular asset in turbulent times when deliberate strategies rely on formal and rigid strategy processes (Kopmann et al. 2017). As discussed in Section 2.3, selection of alliance partners in projects is predominately based on what each party can bring in know-how, experience and expertise; these are all part of PKM, although not all of them are embodied in a concrete and systematic approach to PKM.

Hanisch et al. (2009) identify specific problems and challenges relating to KM, but do not identify how to manage knowledge in project-based businesses. This view may be a product of their simplistic, general definition of PKM as 'knowledge management in project situations, that is, both within projects and between projects' (Hanisch et al. 2009, p. 148). This suggests the ephemeral nature of the project structure but masks the fact that, particularly in project-based endeavours, knowledge is often tacit – in other words unspoken (Nonaka & Toyama 2003) – and, situated in social groups and situations (Bresnen et al. 2003).

2.8.2 PKM and Tacit Knowledge

The focus on the management of explicit knowledge is widespread in project management; however, little attention is given to the sharing of tacit knowledge through human interaction (Pretorius & Steyn 2005). From a business and project perspective, where a great deal of knowledge is tacit by virtue of being situated in individuals, social groups and situations, this knowledge becomes much more difficult to exploit. Individuals and their networks, have significant capital intellectual and social capital. According to Nahapiet and Ghoshal (1998), social capital is 'the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilised through that network' (p. 243). These assets include information, know-how and unique expertise.

The value embedded in PKM is not only individuals' knowledge, but also their willingness and ability to clearly articulate it through a system of meaning for understanding, acceptance and deployment. Due to constant interpretation and re-contextualisation, no (individually) stored knowledge can remain untransformed; social capital is the filter through which intellectual capital is accessed (Walker & Christenson 2005). In examining knowledge-sharing in engineering project design teams to achieve an efficient design, Zhang and Cheng (2015) investigate the role of the network component of social capital. The mediating role of social capital has a significant indirect effect on knowledge-sharing (Zhang & Cheng 2015). This has implications for selection decision-making and the overall attraction and retention of these individual's and the capital they bring to the project.

2.8.3 Project Knowledge-sharing Enablers

In project-team KM terms, an *incentive system*, *continuity* and *autonomy* are the three enabling factors for individuals to share their knowledge, according to Eppler and Sukowski (2000). The incentive system needs to have direct effects on knowledge-sharing behaviour. Placing people into key roles that empower leadership and a positive team climate significantly influences individuals' knowledge-sharing behaviour by affecting their attitude toward sharing their information, insights and suggestions (Xue et al. 2011). This has practical implications for recruitment and team design to facilitate knowledge-sharing.

Bresnen et al. (2003) contend that there is very little detailed analysis of social mechanisms that support knowledge-sharing across projects and the communities that link them together. In more recent times the inclusion of the *project office* into organisation structures has become more common.

Organisations that are predominantly project-based or have a single project of a size and history to justify its own *project office*, as in this study case, have moved some way to capturing hard data for use across projects (Walker & Christenson 2005). However few companies have moved to people-warehouse the individuals' project knowledge. In other words, the significant function of PKM, that is its propagation, still sits with the individuals; in the majority of cases it migrates with them across projects and shapes their careers. Due to this embodied nature of knowledge within the skill sets and competencies of individuals and groups, overcoming barriers to effective PKM requires a range of interventions, which are broadly on a continuum of 'cognitive' to 'community' models of KM (Bresnen et al. 2003, p. 158). The cognitive models are information-technology-based for retention and circulation, whilst the community models focus on the tacit dimensions of knowledge, particularly, its stickiness to social groups and/or individuals.

2.8.3.1 Project Knowledge-sharing Interventions

Hanisch et al. (2009) develop project knowledge-sharing interventions, extracting four categories of success factors for PKM: information and communication technology; organization; methods; and culture and communication. Information and communication technology are identified as an enabler; methods, which they define broadly as easy-to-use project standards and processes, are more of a hygiene factor in PKM. Hanisch et al.'s (2009) discussion on PKM leads to what they conclude to be the fundamental important factor of PKM: culture.

Owen et al. (2004) had previously reported this view of culture as an important factor of PKM, stating that effective PKM requires a strategic fit between social networks, technology, processes and corporate culture supported by a preference for informal over formal networks.

Using Bresnen et al.'s (2003) continuum (discussed earlier in this section) as a reference point, the research of Green and Aitken (2006), Jackson and Klobas (2008), Hanisch et al. (2009) and Guldborg et al. (2013) would suggest that the resources that organisations apply to PKM are strongly weighted toward cognitive models, but that project and business objectives would be better served by investment in community-based models.

There is some evidence that cognitive/e-tool models of PKM are in fact growing in the commercial arena; examples include systems like Project Management Body of Knowledge (PMBOK) and Building Information Modeling (BIM) both of which have been characterized as Computer Aided Design (CAD) meeting PKM (Rokooei 2015). However, the claim that, for example; the BIM system through its integrated project delivery 'recruits all parties involved in the project and makes them a coherent team' (Rokooei 2015, p. 89), is at best a marketing pitch rather than a reflection of any realistic capability of any system in today's world. Rokooei (2015) does integrate the human factor to some degree acknowledging that because mutual relationships are a feature of such systems, user characteristics do influence their effectiveness. Technology and structures can only enable bringing people together to share and create knowledge. Jackson and Klobas (2008) are strongly critical of organisations that 'continue to attempt to implement systems which ignore these social constructions' (Jackson & Klobas 2008, p. 336).

2.8.4 PKM and Selection

If individual and social constructs are so important in PKM, the selection challenge is to attract and retain people who can not only make tacit knowledge explicit but also to work out how social practices are played out within the project management team and find ways of aligning them. The selection challenge is further complicated in an alliance-executed project, where each partner organization has its unique social norms.

While resources are very consciously applied to the alignment and integration of systems in these projects, in PKM terms the lens has little focus on people-selection. Bresnen et al. (2003) suggest two reasons for this: First, because projects are highly task-focused they mitigate against the emergence of actor networks that establish a community based on shared understanding.

Second, knowledge and learning 'inevitably cut across strong institutional, professional and contractual boundaries and demarcations' (Bresnen et al. 2003, p. 159). This environment is 'likely to have a negative effect on the 'absorptive capacity' of the organisation - its ability to recognise the value of new knowledge, assimilate it with existing knowledge, and apply it to commercial ends' (Bresnen et al. 2003, p. 159).

The mitigation of these two conditions, at least in part, lies within the characteristics and personalities of the individuals selected into project roles. The competency models and selection frameworks discussed earlier in this chapter need to take into account the individual's propensity to cultivate trust and share values across communities of practice (Bresnen et al. 2003). If this occurs, PKM objectives within the endeavour are more likely to be cultivated as knowledge is created, diffused, applied and influenced by context-in-practice through collaborative mechanisms such as joint work and dialogue. For PKM objectives to be achieved and leveraged to generate new intellectual capital, four conditions must be met: individual's must see an existing opportunity for combining or exchanging knowledge; they must anticipate value to be derived from the exchange; there must be motivation to share; and the organisation or individual must have a real or perceived capacity to learn or absorb new knowledge (Nahapiet & Ghoshal 1998). This insight suggests a further focus on the project-environment and team-fit inputs to the selection decision-making framework, as causal ambiguity in these areas may have an impact on attraction and retention.

2.8.4.1 PKM and Intra-project Selection

The literature regarding PKM concentrates mainly on the management of knowledge across projects. Outside of the discussion around the project-office management of knowledge in projects of significant size, very little is mentioned about the knowledge transfer within any one project. This is a significant issue in mega-projects, as study phases often gradually morph into the execution phase rather than having a structured end and beginning. This is not so much in the overt stage-gates of time, budget and specification in the project but certainly regarding individuals, networks and project social norms where, as discussed, a great deal of project knowledge resides and is transformed into project benefits through the retention of these soft assets. Eppler and Sukowski (2000) highlight *continuity* as one of three enabling factors of project-team KM, suggesting that a stable team composition leads to high levels of performance in projects. The other two factors are *team autonomy* and *performance management and incentive systems*. These enabling factors apply both between and within projects.

Eppler and Sukowski (2000) suggest a more complete process of team knowledge auditing that could feed into a competency model for selection. Their suggestion is similar to a task analysis and matching process with individuals and applies to both new recruits and people currently on the project. The know-what, know-how, know-who approach for everyone on the project, particularly in the management group, helps avoid implied knowledge expertise due to time on the project alone; the flawed assumption being that length time on the project equals greater knowledge.

From this review there is evidence that at least two characteristics of PKM have significant impact on the people in senior project roles, yet are not, or not overtly at least, considered factors in their selection. Tacit knowledge because of its power to influence the outcome of a project needs further examination as a factor in the selection of the project leadership team. Similarly the intra-project knowledge transfer, including tacit knowledge, not only within the implementation phase of a project but also between phases, also needs examination as a foundation consideration for people-selection.

2.9 Relationship Capital

In the two previous sections relationships and their influence on selection decisions have appeared as a persistent theme. Section 2.6 - Power and Control made reference to referent power, based on the individual's identification with another individual (Raven & French 1958) and to building and using relationships (Landells & Albrecht 2017). Section 2.8 - Project Knowledge Management highlighted the tacit dimensions of knowledge, particularly, its stickiness to social groups and/or individuals (Bresnen et al. 2003); it also highlighted that PKM requires a strategic fit between social networks, technology, processes and corporate culture supported by a preference for informal over formal networks (Owen et al. 2004).

2.9.1 Relationship and Other Capital

Relationship capital (RC) has for the most part, had a marketing skew in the business world. It is spoken of in terms of customers, suppliers and employees and measured, amongst other things, by business sustainability through customer retention, positive word-of-mouth referrals and better matching of salespeople to their customer portfolio.

RC is a part of the corporate lexicon along with intellectual capital (IC) and human capital (HC) and more recently has been considered to form a portion of the intangible assets by which businesses are measured, bought, and sold. A review of the literature reveals that the definition of RC is very diverse, on the spectrum from the very generic (encompassing all relationships) to the very specific, depending on the definer's background and context: industrial, economic, market, organisational or psychographical. Most of these descriptions show major differences in their concepts; however, it is not unreasonable to expect that RC will play a different role in a different milieu. Its definition is also clouded by the often loose conceptualisation of RC's bond to other concepts, including IC and SC.

The struggle in interpretation of the literature regarding RC, IC and SC is that sometimes they will appear to be on the same overarching human-capital ladder of abstraction and at other times appear quite divorced from it. In particular, RC and SC are used as proxies for each other in the literature (Belout & Gauvreau 2004; Sarkar et al. 2001; Tansley & Newell 2007). These inadequate descriptions may be explained, to some degree, by the evolution of the terms and growing clarity about their meaning as greater insights are achieved through ongoing research. The bridging and bonding aspects of RC to SC are summarised in Table 2.4 below.

2.9.2 The RC-SC Spectrum

According to Peters (2015), RC is an open standard of accounting for the quality of the interactions between *entities*, including people, businesses, and products. Interactions include, commitments (actions) and perceptions (thoughts and feelings). Unlike most definitions of RC, this definition highlights perceptions as a part of RC and opens up how RC may be used by the group or individual who have or believe they have capital derived through a relationship.

As relationships can be casual, fleeting and one-sided the capital is subjective. For example, a fan who has – and in fact is encouraged to have - a relationship with a pop-star or a football team is rarely known personally by the star or the team members, however the relationship value to that person is very positive in things like personal enjoyment, belonging, broader group recognition and shared satisfaction in the success of their star/team. Similar efficacy can also be found in an organisational context. In contrast SC is where psychological contracts are honoured and where genuine and positive reciprocity is central to the concept.

Table 2.4 Social capital compared with relationship capital

	Social Capital	Relationship Capital (At the lower end of the spectrum)	Differences / Similarities
Definition	The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilised through that network. (Nahapiet & Ghoshal 1998, p. 243)	The value (real or perceived) of all relationships. (Ecclestone & Field 2003, p. 268)	These definitions suggest that relationship capital encompasses social capital to a large degree.
Recognition	Mutual; agreed on	Individual; subjective	Agreed -vs- perceived
Reciprocity	Central to the concept; genuine and positive	A pretext based on expectation	Genuine –vs - a pretext

Table 2.4 Social capital compared with relationship capital (cont'd)

Obligation	Generalised for repayment in the future	None required	As stated
Foundation	Trust as the antecedent	Perception of <i>companion</i> trust	Genuine trust as opposed to perceived trust
Benefit	Mutual e.g. open knowledge exchange	Plethora of real and perceived benefits	SC has a consciousness of the benefits whereas RC can be 'eye of the beholder'
Need	Reciprocal	Belonging	SC = 2 way; RC = 1 way
Type of relationship	Bonding	Indirect casual to direct formal. Can even be fickle.	SC = 2 way; RC = 1 way
Strength of relationship	Strong and usually long-term	Very low to very strong depending on which party is measuring	SC has a consciousness of the mutual strength of the relationship and value it; whereas RC can be dependent on time and situation.
Interaction	Developed and exploited	May not be developed; is generally exploited	Both exploited the relationship for their own benefit.
Psychological contracts	Honoured	Perceptions expected to be honoured	Genuine in the commitment to be honoured -v- a pretext.

Researcher's synthesis of the literature

2.9.3 Characteristics of RC

The calculation of RC includes: positional (role-based) power and personal influence; type of relationship; strength of relationship; and number of touch points (direct or indirect contact) on both sides (Ecclestone & Field 2003, p. 270). The strength of these characteristics may designate the value of RC and move the relationship toward SC. 'Over time, interaction and connections give rise to shared norms, trust and reciprocity which in turn fosters cooperation to achieve common ends ... social capital is defined in terms of relationships and collectivities' (Tansley & Newell 2007, p. 354).

As noted in the previous section, trust is fundamental to the exploitation of project knowledge and social capital. Newell and Swan (2000) developed a three-fold typology of trust: commitment, companion and competency trust. *Commitment* trust is mostly formal agreement but can also be psychological, and is based on the parties' expectations that, through cooperative relations, there will be mutual benefit. If a contract must be referenced by either party at any time the trust is already in decline or totally lost. *Companion* trust is developed over time and is more strongly based in morals and emotions. The parties expect honesty and openness due to the presence of goodwill or personal friendships. The loss of companion trust will cause the greatest rift between parties. *Competence* trust is based on an attitude of respect for the trustee's ability to undertake the task at hand. It is gained quickly but is fragile and can be just as quickly lost if the trustee does not perform (pp. 1295-6). Reflected in these characteristics is a spectrum based on the quality of interaction between SC and RC. At the RC end of the spectrum interaction can be casual, fleeting and one-sided; at the SC end, the interaction quality is increased to a level of shared norms, trust, reciprocity and cooperation to achieve common ends.

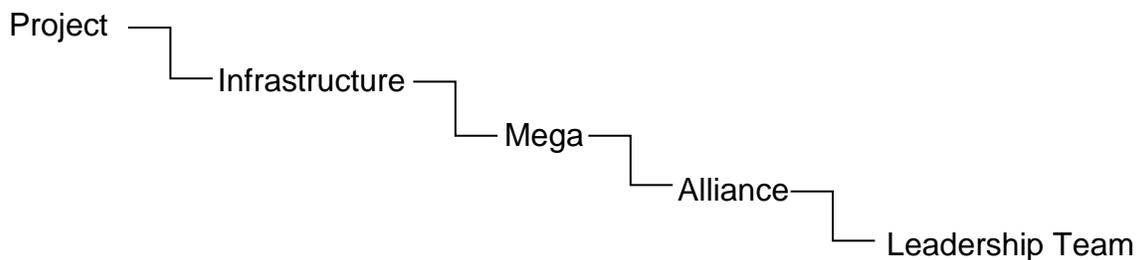
RC in project management has both micro and macro meanings. In a macro sense it is the contacts, networks and experience of people and cultures that the individual may bring to the project. In contrast, micro RC is the positive personality traits, interests and skills that when invested in the project, bring positive working relationship and teamwork synergies. From some perspectives relationship capital is seen as organisational political capital. In the five categories of organisational political behaviour discussed in Section 2.6.2, to build and use relationships is the foremost. Significantly Landells and Albrecht (2017) report that one of the three main reasons for doing this is to 'build key relationships and networks for use in the future' (p. 48). As a consequence, when considering the factors that influence the selection of people for a project leadership team it is necessary to consider the value of relationships.

2.10 Summary

As stated at the beginning of this chapter the key objective of this study is to understand the factors that influence selection decisions in the leadership teams of alliance mega-project structures. The literature review was an iterative process beginning with this research question from an existing problem (how was the project leadership team selected?). Thus, an initial literature review was conducted based on the key words in the research question – selection, decision-making, mega-project management. This search revealed gaps in the literature, and informed a narrowing of the research question. The final version of the research question was formed to answer questions that were not adequately addressed in the existing literature. How do the eight multi-disciplinary literature streams discussed in this chapter support these objectives? As indicated in Chapter 1 (section 1.8) the case findings (Chapter 4) reflect the context in which the selections decisions occurred and the actors' responses to the selection-decision processes.

The sections in this chapter on Project Management (Section 2.2), Alliance Projects (Section 2.3), People-selection (Section 2.4) and People-selection in a Project Environment (Section 2.5) support understanding of the pertinent contextual factors that influence the selection decisions in this case.

Figure 2.4 Literature review context schema



The discussion of *contextual* factors from the literature highlights that although there has been some research into the macro issue of selection of alliance partners, there has been little or no research about how people who are to manage the alliance organisations are selected. There is recognition in the literature that a project environment is different from the conventional structure of business; however, there is little examination of the impact on selection decision-making within this environment.

In what has been called the biggest investment boom in history, mega-projects are constantly growing ever larger (Flyvbjerg 2017). The management of the supersized iron triangle (on time, on budget, on specification) of mega-projects is identified as a main challenge of mega-projects and has not improved positively (schedule delay, cost overrun and benefit shortfall) in the 90 years in which comparable data is available and too consistently is being conceded to the iron law of megaprojects; “over budget, overtime, under benefits, over and over again” (Flyvbjerg 2017, p. 2).

The core of the research question is the factors influencing selection decisions. In his extensive research on mega-projects, including that on challenges, causes and cures, Flyvbjerg (2014, 2017) nowhere mentions the selection of people into roles on megaproject teams but does highlight the errors of these people in non-delivery of project outcome. This after-the-fact view begs the question of, was the poor delivery in some way due to the factors in the selection of these people? Literature in this area spotlights bounded rationality and uses egalitarian norms of equality and justice in selection. Further, the literature examines the morally relevant question of whether selectors' deliberations or motives are acceptable, and asserts that the answer must refer to the ideal of selectors being moved by the attitude of equal respect toward different individuals (Clayton 2012). There is a suggestion that this can be done by conceptualising selection as a series of steps for practical deliberations in decision-making: 'assembling versions of candidates; establishing the versions of candidates as factual; reaching selections decisions; and using selection tools as sensemaking devices' (Bolander & Sandberg 2013, p. 285).

Figure 2.5 Literature review process schema



The four literature streams (Sections 2.6 to 2.9) that feature in the dynamic processes that place each individual into their particular roles suggest that this is far from the reality. Stockholder and stakeholder dynamics, client power-in-use, leverage of tacit knowledge and relations and the effect of cognitive and sociopolitical issues all put pressure on the theoretical model of selection decision-making.

As addressed in sections 2.3.1 and 2.3.2 the mega-project environment presents a unique context for these people-selection processes to gestate. This amalgam suggests a gap and highlights a unique opportunity for deeper research.

The research question is as follows:

What factors influence the selection decisions for leadership teams in alliance mega-infrastructure projects?

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter details the research design and methodology and illustrates why they are appropriate for exploring the research question. The terms “quantitative” and “qualitative” as applied to research methods are sometimes used dichotomously to indicate different ends of sociological field research. This study is positioned in the qualitative genre, as it employs retroductive analysis and ethnography methods. The selection of these methods is due to their capacity to facilitate exploratory studies within real-world environments as is the case in this research. The research question asked *what factors influence selection decisions* and looked to thicken the descriptions of these elements as a contribution to the overall research in a number of fields, including people-selection and decision-making.

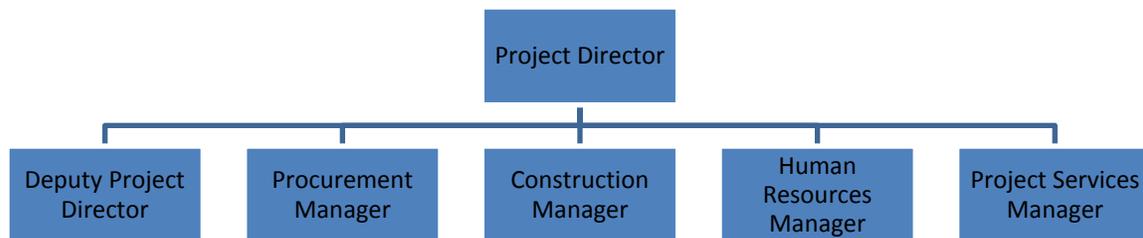
For the first part the research opportunity and self-ethnographic approach were presented to the researcher as the unique situation of *insider-research* (Brannick & Coghlan 2007) through being employed as a consultant to work *on* the project rather than *in* the project. As Alvesson (2003) states, for this type of study, observing participation is better than participant observation. The retroductive interviews and content analysis completed the research methods and supplied unique insights to the case.

3.2 Research Design and Methodology

A number of valuable considerations identify the worth of a research study, including what issues are worthwhile for study, what explanations of the study observations are meaningful interpretations and what methods of gathering and analysing data are acceptable for use (Ledgerwood et al. 2017). These considerations structured the methodology of this research study.

The research used a case-study approach to assess what factors were considered in what context when deciding to select individuals for a project leadership team. The six positions of the PLT as it was structured at the beginning of the project were the focus for the study.

Chart 3.1 Project leadership team - organisation chart



Source: Project Protocols presentation 31st March 2010

The study followed a retroductive approach which combines elements of both inductive and deductive research. Retroduction is 'the logic of inference espoused by critical realism. As such, it can provide the basis upon which different insights upon the same phenomenon can be sensibly combined' (Downward & Mearman 2007, p. 1). This approach to social research allows not only the overt representation of the study subject but also the opportunity to test these representations. As Ragin (1994, p. 55) writes:

'Social research involves a dialogue between ideas and evidence. Ideas help social researchers use evidence to extend, revise and test ideas. The end result of this dialogue is a representation of social life - evidence that has been shaped and reshaped by ideas, presented along with the thinking that guided the construction of the representation'

Table 3.1 collates the interview approach to data collection for this study, including who was interviewed, the timing and frequency, and the structure and original objective for each of the interviews. Only the post-project, semi-structured interviews were specifically undertaken in support of this study. The notes from all other interviews were included as documents in the overall content analysis. These notes of pre-project interviews and the notes of those interviews conducted during the project constituted secondary data. Because the same researcher conducted these interviews they provided a rich reminder of some of the context variables that influenced selection decisions. While secondary data can sometimes be problematic if the data was collected for a different purpose than the current research (Stewart 2012), in this case the data related to the same project and thus provided guidance on whom to interview and what topics to clarify in the present research. It should be further noted that the interviewees listed represent the total population (that is, all six members) of influencing and decision-making stakeholders for the PLT positions.

Table 3.1 Research interview approach

Interviewee	Pre-project	During	Post-project
Client Project Director	Structured (project status including PLT selections)	Unstructured (usually as a part of the bi-monthly review)	Semi-structured (lessons learnt review - Aug 2015)
Client Project Representative 1	Structured (project status including PLT selections)	Unstructured	Semi-structured (lessons learnt review - Aug 2015)
Client Project Representative 2	Structured (project status including PLT selections)	Unstructured	Semi-structured (lessons learnt review - Aug 2015)
Alliance Engineering Specialist Managing Director	Structured (project status including PLT selections)	Unstructured (usually as a part of the bi-monthly review)	Semi-structured (lessons learnt review - Aug 2015 - different Alliance engineering specialist representative)
Alliance Mechanical Construction Specialist Director	Structured (project status including PLT selections)	Unstructured (usually as a part of the bi-monthly review)	Semi-structured (lessons learnt review - Aug 2015 - different Alliance mechanical construction specialist representative)
Alliance Civil Construction Specialist Director	Structured (project status including PLT selections)	Unstructured (usually as a part of the bi-monthly review)	Semi-structured (lessons learnt review - Aug 2015 - Different Alliance civil construction specialist representative)

Table 3.1 Research interview approach (Cont'd)

Interviewee	Pre-project	During	Post-project
Project Director	Structured (project status including PLT selections)	Semi-structured (bi-monthly review of project progress)	Semi-structured (specifically for this study 18th May 2016)
Project Deputy Director	Structured (project status including PLT selections)	Semi-structured (bi-monthly review of project progress)	Semi-structured (specifically for this study 10th June 2016)
Procurement & Contracts Manager	Structured (project status including PLT selections)	Semi-structured (bi-monthly review of project progress)	1. Semi-structured (lessons learnt review - Aug 2015) 2. Semi-structured (specifically for this study 8th June 2016)
Construction Director	Semi-structured (part of the selection process)	Semi-structured (bi-monthly review of project progress)	Unable to be contacted
Project Services Manager	Structured (project status including PLT selections)	Semi-structured (bi-monthly review of project progress)	1. Semi-structured (lessons learnt review - Aug 2015) 2. Semi-structured (specifically for this study 27th June 2016)
Human Resources Manager	Structured (Project status including PLT selections)	Semi-structured (Bi-monthly review of project progress)	Deceased

Client and Alliance board members

Project leadership team

The initial data from the content analysis of the project documents was analysed at a meso-level; that is, examining localised meanings and themes within the project, which were then used to map the data. Gaps in data validation and selection process were filled with data from semi-structured interviews with the key managers themselves and those influencing and deciding on their appointment to the PLT positions. Any prompting in the interviews was to clarify understanding of the internal process. Themes and outputs from the literature review and research questions were used as discussion starters. Permission was sought to tape these interviews which were later transcribed.

The transcripts of the interviews were then thematically coded. The coding scheme was bottom-up (as opposed to top-down, to help mitigate any preconceived categorization), mainly using the process of abductive reasoning, using an iterative process of identifying a phenomenon, interrogating the literature and using critical colleague discussion to reduce subjectivity. Coding led to constructs being extracted that were salient and relevant to the research question. For example:

Quote:

'They [the client] approved of it. They were consulted and they did actually veto, in other roles, some candidates.'

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

Category from research question:

Decision-making

Theme:

Power and Control

These constructs or themes are examined in detail in Chapter 4. To assist with the explanation of the results and to understand their contribution, Lewin's five levels of explanation were used.

Table 3.2 Lewin's five levels of explanation

Level	Type of explanation
Description	An account of an event or phenomenon from a particular standpoint, whether it is adopted consciously or unconsciously.
Taxonomy	A classification scheme designed for a particular purpose that groups together events or phenomena on the basis of similar characteristics.
Model	A simplification or representation of relationships between events or phenomena that is designed to provide a clearer picture of events or phenomena.
Law	A statement of a relationship between two or more variables that inevitably produces the same outcome, in terms of events or phenomena.
Casual theory	A complete answer to the 'why' question which not only identifies the inevitable relationships between variables but also provides an account of the process by which one determines the other.

Source: Derived from Lewin (1994, pp. 19-27)

This approach provided a way to describe patterns in the decision-making and selection processes, thus reaching Lewin's second level of explanation: taxonomy. There was no prior definition of what the themes would be; instead, the researcher kept an open mind to understand what the participants thought was relevant. As noted earlier, bottom-up, abductive reasoning, an iterative process and using critical colleague discussion helped the researcher keep an open mind. However, as Alvesson (2003) suggests 'generally there is a relatively high level of intersubjectivity in the evaluation of what is interesting' (p.182).

patterns of social discourse. Selves are inseparable from their social contexts and are elaborated through relations with others' (Mascolo & Dalto 1995, p. 182).

Social frameworks structure people's observations including self-observation. Gergen (1991) asserts that social interaction shapes our decisions and suggests that through social saturation, in other words through individuals' constant interactions with others, 'selves have become increasingly populated with the character of others' (p. 71). In the process of internalisation, by which external stimuli are translated into internal meaning, Vygotsky, 'believes that egocentric speech constitutes just a transitional step leading to the development of inner speech, corresponding to reasoning skills crucial to planning and problem-solving' (Williams 1989, p. 110). Mascolo and Dalto (1995) report that 'verbal mediation', another crucial element in Vygotskian theory, influences decisions through a 'silent dialectic' received from social interaction of 'generalisations' and 'mature conceptualisations'. Strong memories of events, experiences, behaviours amplify this internalisation and give structure to and prioritise the multiplicity of selves. Meaning is a product of social constructivism. Social constructivism is an important construct in this study when considering that many of the interviews were conducted some time after the completion of the project. As a consequence the passing of time, subsequent interactions and silent dialectic may have affected the post-project interviewees recall and/or shaping of the circumstances and the decisions that were made. It is possible to collect documented data and compare the interviewees' statements as a part of this study to identify to what degree documents and their recall differs.

3.4 Validity and the Research Process

The two key methods of research in this study were interviews and content analysis. While both are well-established and widely used research methods, their validity that is, whether the method actually measures what it is supposed to, lies in how the methods are used to produce the results.

Although there is no focus on external validity in this social constructivist paradigm there is value in considering the premise that to gather data only from respondents 'ignores all facets of events that are carried not in person, but in the situation, stimulus, or context' (McGrath & Brinberg 1983, p. 122). It is clear in this study that situation, stimulus and context all play crucial and complex roles in input, process and output of the selection decision-making processes under study. Therefore, the coupling of interview analysis and analysis of elements in context, such as documentary evidence of the selection processes (secondary data), increases the study's validity and adds to the significance of its outcomes.

Interviews in themselves have significant problems (for example, the interview questions themselves and interviewer bias); however, even if these are accounted for, the interpretation of the interviews to make different kinds of empirical claims can also introduce inaccuracies (Alvesson 2003). Being conscious of these potential pitfalls and using critical colleague discussion helped alleviate these problems. Due to the mainly quantitative use of content analysis, face validity was often assumed, given that the method's rigidly defined categories and coding give it a high degree of reliability (Nandy & Sarvela 1997). This is in contrast to the use of content analysis as a qualitative method to explore latent themes and other finer motifs, as in this study. How these issues were considered for the current research will be discussed relative to each method in Section 3.4.2.

Both interviews and content analysis raised questions about breadth and depth. Do the pre- and post-project interviews and the documents in the content

analysis represent the input, process and output of the subject being studied and do they go to the depth required for this study to have significance? All decision-makers involved in the selection of the PLT were interviewed, along with a number of people who were influencers, and/or recommenders of people for the PLT.

In the content analysis, there was a concerted attempt to analyse all of the content available; however, it is acknowledged that text source selection may still have suffered from human fallibilities and judgement errors on the part of both the researcher and those giving access to relevant sources. This secondary data, that is, data collected by someone else for some other purpose, yet being utilised by the researcher for another purpose, was a critical input to the study. No explicit weighting was given in the data analysis to one source over the other, that is, primary or secondary sources of data. To not accept and value inputs from all relevant sources, decision-makers, influencers, recommenders and all content available would downplay the rich vein of data and perspectives in this study.

3.4.1 Interviews

As reflected in the research design methodology, this piece of research, as does most qualitative research, required conducting and interpreting a number of interviews. Interviews were conducted at different stages of the project: before the project 'go live', during the project and after project completion. The post-project interviews were the primary source of data from this method, although it should be noted that they were only one of the sources, rather than central or primary to the data-gathering process. (The other sources are discussed later in this chapter.) This is not to deny the rich source of insights, the knowledge, unique perspectives and impressions of those interviewed for the study but to acknowledge the opportunity for a wider breath of data gathering and to minimise the errors inherent in this approach.

Having undertaken these interviews in different times and place was a contextual consideration for a retroductive study. An interview context always involves influences that cannot be minimised or controlled (Alvesson 2003). For example, the perspective of individuals who are still in the selection process for a particular role can be filtered by expectation and the unknown, and post-project interviews are influenced by the lived experience of the role.

As the study employed social constructivism, as a research paradigm, by nature its value is in how the individual's mind constructs its reality at the time, and in the individual's social relationship within the entire situation. 'All research information is contingent on the values of all variables - i.e., all facets of the events, concepts, and methods - under which that information was obtained' (McGrath & Brinberg 1983, p. 119).

As opposed to being an outsider in the research project, being involved as an insider in the project had benefits in having close personal contact with the interviewees and having ardent conversations with them. This makes the interview more morally sound and reliable, because it treats interviewees as equals and allows them to express personal feelings, and therefore presents a more realistic picture than can be uncovered using traditional interview methods (Denzin & Lincoln 1994, p. 371). However, there is also a possibility in this case that interviewees will select material that they think the interviewer is looking for because of their relationship with the interviewer. Retrospective accounts are selective and do not allow fine-tuned analysis of the type of discourse and conversation (Potter & Wetherell 1987; Silverman 1993). Even truth-telling 'may be selective and guided by ideas of the individual and collective interests of the interviewee' (Alvesson 2003, p. 170). It is seldom possible to separate the 'distortions' from 'authentic experiences' or 'correct information' (Silverman 1993, p. 170).

There was some attempt in the post-project interviews to give some consistency in the interview structure using open stimulus questions. These questions were not meant in any way to shape the answers or to stifle the responses of the interviewees rather, they were intended to keep the interview process progressing. Transcripts of interviews that were not conducted by the researcher (for example, notes from employment interviews) have been treated as text and used as source documents in the content analysis.

3.4.2 Content Analysis

Content analysis has been defined as ‘a method of studying and analyzing communications – documents of all kinds, including existing documents and documents deliberately produced for research purposes, books, letters, and so on – in systematic, objective, and quantitative ways to measure variables or to accomplish other research purposes’ (Kerlinger 1979, p. 34). Content analysis is an established research tool with the purpose of providing knowledge, representing fact and providing new insight. As the definition suggests, content analysis has been used primarily as a quantitative tool; however, when it is used solely in this way the opportunity to explore and interpret significant finer themes and latent messages may be lost. ‘Content analysis, therefore, can be both quantitative and qualitative, descriptive and inferential, objective and systematic with generalizable qualities and functions’ (Nandy & Sarvela 1997, p. 225).

Content analysis has an advantage over other research methods (such as interviews) in that it can be conducted without fear that the communicator may be biased by the researcher’s attention. Qualitative work studies look to the meaning and context of what is done or said or what is intended. The evocative data obtained from qualitative content analysis provides an opportunity for the researcher to see patterns in the relationship between variables, and further thematic analysis can give insights to issue- or event-oriented narratives.

As stated, this study explores latent themes and other finer motifs using a social constructivist construct.

The critical starting point with content analysis is the selection of the material to be analysed/studied. Due to the open access that the researcher had in this study, the units of analysis were all project documents, including meeting minutes, presentations, HR records, project schedules and relevant emails. This is analogous to the idea of “population” in other research studies. In a number of cases project presentations were used as sources for analysis. In situations where the researcher was present for the presentation, both the presentation slides and the researcher's notes from the oral presentation were analysed. When the researcher was not present, only the slides were analysed. However it should be noted that where significant content, e.g. a change in organisational structure, was gleaned from the slides, the researcher did have the opportunity to speak with the presenter and to some of those present at the presentation.

Thematic analysis was conducted from the data gathered in both the documentary evidence and the interviews. While these themes are discussed in detail in Chapter 4, the current chapter examines how they were established. The predominant guide for identifying the four themes that emerged from the analysis was the research question although the research was exploratory and flexible in nature. However, it was clear that variables identified by the content analysis in particular led to both priori variables (those that were probable outputs of the research) and inferred variables (those that are not directly observable but are inferred from other variables that have been observed). The theory-based variables - those supported by previous research and theories - had the most value in this study in assisting with a clear construction of the definition for each theme. This association to the theories gave a solid base from which to look at the neighbouring relevant constructs in the themes.

3.5 Writing Up the Text

Transcribing interviews and observations of a complex reality into a research text is difficult. It becomes by nature an exercise in selection and discretion. This is even more the case when the discussion and observations have been conducted over a long period of time in a non-structured way. Moreover, behaviours and meanings may not be clearly reflected in a text (Alvesson 2003).

The quality of the final text requires situational focus (Cicourel & Knorr-Cetina 1981) on actors, behaviours, processes and (project) context. The writing itself adopts a particular style to create various effects – honesty, acceptability, genius. There is an strong awareness to be wary of writing ‘in which the production of understanding and construction of the text are hidden by a form of account that purports to present what is described simply ‘as it appeared’; this being treated, with more or less conviction, as ‘how it is’ (Hammersley 1990, p. 606).

3.6 Researcher and Actor

As an applied researcher, the researcher is also aware that as a consultant to this project the researcher is also an actor. His conscious understanding of closeness versus distance is critical to both his interpretation of the data and the ultimate value of his research. The study thus takes a research approach of self-ethnography, ‘a study and a text in which the researcher-author describes a cultural setting to which s/he has “natural access”, is an active participant, more or less on equal terms with other participants’ (Alvesson 2003, p. 174). Alvesson (2003) asserts that self-ethnography is especially relevant at sites where the researcher is engaged, such as universities, neighbourhoods, consultancy work, political organisations or commercial settings.

The researcher was in the unique situation of insider-research (Brannick & Coghlan 2007) through being employed as a consultant to work *on* the project rather than *in* the project. This set up an opportunity that many researchers never receive. His role on the project was primarily one of observation for the expressed purpose of reflecting back to participants the impact of their behaviours in the context of the situation and project goals. As Alvesson (2003) states, for this type of study, observing participation is better than participant observation. It is clear that many times in his role the researcher was closer to being a researcher than a consultant. The researcher was not involved in the project because of his desire to work in EPCM projects or his expertise in this area, but primarily as an observer and as a self-ethnographer to use the position the researcher was in to research the setting in which the researcher was participating.

Other than self-ethnography offering good research economy (Alvesson 2003), its value is that it immediately establishes the study's scope: that being the setting being studied. In this research that was the specific case under examination. Consequently, the researcher and the ultimate readers of the study findings are clear from the outset about the limits of the findings. McGrath and Brinberg (1983) argue that there is just as much useful information in identifying the limits of the findings as in the findings themselves. Knowledge is always knowledge of differences, and if a finding is unbounded, it cannot add to that knowledge (Runkel & McGrath 1972). The challenge for self-ethnographers is to liberate themselves from the scope to provide sufficient distance to get perspective and objective meaning on the subject.

There is a need to clearly define the researcher's role as a self-ethnographer, and not an auto-ethnographer. This study focuses on what went on *around* the researcher, not what happened *to* the researcher.

The analysis, interpretations and findings are not a reflection of the researcher's lived experience or introspective evaluation of the researcher's time on the project. However the researcher does understand that no matter how conscious the researcher is of closeness and distance his set of observations, as such, are perspectives that only represent a partial view of events, and that his interpretations are inevitably coloured by his own values, interests and background. The dangers of this are a narrow line of sight and lack of objectivity creating bias. The term "bias" may be used to denote one particular source of systematic error: that deriving from the researcher's conscious or unconscious tendency to produce data and/or interpret it in a way that inclines towards erroneous conclusions (Chenail 2011).

In this case no research interest was decided upon in advance. Throughout the project the researcher did not step into and out of the role of researcher whenever the researcher encountered material to support his study; in fact, the material found him. The researcher could not forgo the excellent access possibility for a self-ethnographic study. 'The trick is more a matter of accomplishing a description and insightful, theoretical relevant ideas and comments out of the material' (Alvesson 2003, p. 177). In other words despite the researcher's closeness to the subject, they still have to produce something worthwhile.

3.7 Politics and Ethics

As a part of the post-project interview protocols each interviewee was asked before the interview if they had any issues with the specific researcher conducting the interview based on the researcher's position on the project. This question was specifically asked so that the researcher would be overt about his power or perceived power regarding their past or present positions and/or their future career aspirations.

This was significantly relevant, as in the researcher's professional role as a consultant he works in and around their industry and has professional relationships with their employers, potential employers, clients and potential clients. All interviewees gave expressed consent, both written and verbal, not only to be interviewed but also for the study to be published. In support of this permission the interviewees were also assured, again both verbally and in writing, that their anonymity would be protected and the project in both time and type would be camouflaged. These measures were undertaken as a part of the downsides of coping with the ethics and politics of self-ethnography (Alvesson 2003). They were also undertaken as required by the University's research ethics approval process.

Alvesson (2003) highlights a consultant's advantageous position to undertake self-ethnography research. The ethical, moral and professional protection of the research subjects is often highlighted, and it has been given a great deal of thought-space throughout this work. However, what is not addressed in depth is the protection of the insider-researcher. There is no anonymity for the researcher when they put their name to the published study. The politics of research in ethnography is complicated. Alvesson (2003) highlights the option for the ethnographer to write the study text in a positive light so as not to upset the subjects and to protect the researcher-author from any negative backlash. Alvesson (2003) also suggests that if the researcher takes a strong and direct approach 's/he may get more enemies at close distance' (p.183).

The implication is that a consultant, who relies on networks and relations to earn a living, requires discipline and courage to take on an ethnography research project and author a study that has value. The ethical problems as well as the commercial-in-confidence issues require delicate attention. There needs to be support for the insider-researcher's sincere willingness to do something with the rich material available to them. This approach, therefore, hinges on mutual trust between the subjects and the researcher-author.

Without this connection there would be no access to the data and no way of studying the critical people-selection process for an alliance mega-infrastructure project at this depth. As reflected in the contribution of this study the positives outweigh the negatives, and as long as the researcher takes a suitably scholarly and reflective attitude the study will return meaningful insights.

3.8 Summary

The field of research methods adopted in this study are data analysis through a social constructivism paradigm, retroductive analysis and the positioning of the study in the qualitative genre. The selection of these approaches is due to their capacity to facilitate exploratory studies within real-world environments, providing a means of gaining access to, and motivating interpretations in meso terms of, the social processes of this case. The research question asks *what factors influence the selection decisions for leadership teams in alliance mega-infrastructure projects* and looks to thicken the descriptions of these elements as a contribution to the overall research in a number of fields, particularly people-selection and decision-making. As all research methods have their limitations the researcher used for coding, interview reviews and content analysis a scheme of bottom-up, abductive reasoning and an iterative process - identifying a phenomenon, interrogating the literature and using critical colleague discussion - to mitigate these limitations. The discussion in this chapter provides a critical-descriptive background of the research methods, including their limitations, as a foundation for the detailed interpretations of the findings in this study.

CHAPTER 4: FINDINGS

4.1 Introduction

This chapter examines the findings from an analysis the three primary research-gathering sources: the post-project interviews, the in-project interviews and discussions and the content analysis of data, both that in the public domain and that gathered throughout the researcher's time on the project. Guided by the primary research question, the chapter analyses (What have we got?), assesses (How much of it have we got?) and, to a lesser degree, evaluates (What is it worth?) the factors influencing the selection of those who initially occupied the six positions on the PLT. As the study is a retroductive one, the researcher is left with an ex post facto rationalisation of a known result (that is, which candidates were selected).

This chapter contextually develops the project environment that influences the behaviour of all stakeholders and ultimately underpins the selection decisions. The Alliance ideal is reviewed in the light of the data. Its convener's philosophical view of alliances and his sell-in to the other Alliance members are appraised. The motivation of the Alliance members and the opportunity of the Alliance to make decisions, specifically on the selection of the PLT members, are examined through the lens of a highly controlling, non-empowering client. The HR manager's genuine attempt to bring professionalism and objectivity through the development of the project selection framework is explored. The use of this framework is scrutinised and its use in obtaining legitimacy, as opposed to its legitimate use, is investigated. Finally, four broad themes - power and control, legitimacy, project knowledge management (PKM) and relationship capital (RC) as elucidated by the research data analysis are considered in depth.

As discussed in the Section 2.1, the area of research to be investigated is people selection in a project environment. The first area is about the context in which these decisions are made; in this case a project context further defined in that it is a single case of an alliance structure in a mega-infrastructure project in Australia. The second area is about process and, in turn, processes within processes, particularly the decision-making process within the process of selecting the PLT. This chapter deals with the findings from the study of both components, starting with the context.

4.2 The Environmental Context

The circumstances in the business environment that were background factors to every decision made in Project North V3 have been discussed in some detail in Section 1.6. The initial project context led to a project philosophy of “best for project” and a proposed governance structure as shown in Figure 1.1. Behind this structure were significant financial arrangements that augmented the circumstance for the Alliance members.

There were quite complicated commercial arrangements.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

There was reasonably significant risk and reward component but that was capped as well. For the three parties. So if we had under-run, if we under-run the agreed target the three parties would share the under-run and in some cases the client would get some of that as well. It was a scaled approach with a cap. And likewise if there was an over-run, the three parties would have to pay for a substantial portion of that over-run.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

The client, a chemical producer, was inexperienced in EPCM projects and this greenness showed very early.

There were unrealistic expectations at the outset based on incomplete information.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The client also had little experience in managing multi-site, multi-disciplined, multi-partner structures.

A big problem was that the previous project leadership team was all [other side of Australia] based.

(Post-project interview: Melvin, Procurement and Contracts Manager, 8th June 2016)

4.3 The Structural Context

4.3.1 The Alliance

Alliances may be viewed through a number of different lenses including association, relationship and agreement. They can be between individuals, groups or nations, and are formed to achieve a common purpose or for mutual benefit, although they may or may not involve an explicit or documented agreement. Through the commercial lens, alliances are an increasingly promising business strategy (Walker & Christenson 2005), and the allied links in project undertakings are usually extraordinarily formalised through contracts and JV agreements. However, alliance relationships in multi-partner ventures that truly partner, bond and tie the cooperative effort and outcome are both difficult to manage and sensitive in practice.

In this case, the managing director of the Alliance engineering specialist , Alexander, who was the driving force behind bringing the alliance together, had a purist view on what Alliances were and how they could work.

If you asked the experienced or the business people in the Alliance, they would say, 'ah, yes, that project, it was that one that we followed Alexander's ideal; a model to present, to offer a complete service from engineering through to commissioning.'

(Post-project interview: Kingsley, Project Director, 18th May 2016)

From that perspective the model may have been turn-key for the client; however the critical aspect for the Alliance convener, Alexander, was that *all* resources, including the people resource at every level, came from within the Alliance. By virtue of this view he believed and convinced the other Alliance members to believe that all resource decisions would be made within the Alliance structure. From the outset this model was supported by all Alliance members.

The alliance model is valid in this project.

(In-project interview: Board member - Alliance mechanical construction specialist representative, 18th March 2010)

[The] Alliance engineering specialist, Alliance mechanical construction specialist and Alliance civil construction specialist are well aligned.

(In-project interview: Board member - Alliance mechanical construction specialist representative, 18th March 2010)

Alexander left no doubt of his belief in the alliance model he had convened, stating that it would be an 'Australian Business Excellence Process' and expected that 'awards' would ensue.

There was a very strong lead in the period prior to the approval by Alliance engineering specialist to win this contract to demonstrate to the client that the Alliance could execute the contract and a very strong involvement by Alexander and people from within his organisation.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The client had their own view on the Alliance model, from positive to guarded optimism. Referring to previous attempts to implement the project and their structures, a client representative said:

Certain things won't happen again; [there is now a] better commercial model.

(In-project interview: Client Project Controls Manager, 17th March 2010)

Other client representatives commented on the alliance philosophy as a structure model:

Even the alliance structure itself is not common, it is not unheard of, but making alliances work is pretty hard. It isn't an equal partnership and having three parties, rather than one lead with subcontracts, that is a bit different as well.

(In-project interview: Alliance Board member - client representative 1,
30th March 2010)

Alliance teams can have hidden agendas. Owners have a contract. That is all we are interested in.

(In-project interview: Alliance Board member - client representative 2,
31st March 2010)

Independent of any other reason for the support or otherwise of the model, there was a strong commercial rationale, if not a commercial imperative, for the resourcing to come from within the Alliance. The more people, equipment and time that each member put into the project the more profit they made for their respective companies. The construction-contract component of the project was costs reimbursable plus an agreed margin. This set a dynamic for the modus operandi of the three Alliance members. Adding to this dynamic was that the Alliance engineering specialist and Alliance mechanical construction specialist had worked together on previous iterations of the project.

From the outset, on the surface at least, the three partners fulfilled a number of the characteristics of an alliance organisation. Referencing the descriptors shown in Table 2.2, they were exclusive; there were no partnering deals outside of the Alliance and no subcontractors. They had an agreement; based on a 'handshake' between the three. This style of agreement gave at least one of the members some solace; he quipped that, otherwise *'it could have been lawyers at 10 paces'*. They had a common purpose and objective that they pursued while remaining independent organisations. They agreed on boundaries; to a large degree these formalised by the project's master schedule and the scope of works. They had trust in each other.

So the Alliance Board which is the three JV partners and it had three members of the client team. And so it was evenly weighted so there couldn't be ... one group overriding the other. There were rules in place about majority and the likes. So there was a mandate or a charter that was developed to ensure that it wasn't just one group out of that Board making all the decisions. It had to be a consensual decision.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

The client had a different perspective of the Alliance partners' ability to work together:

We saw challenges and continued to see challenges with that structure as we went through with the structure because managing and dealing with the competing commercial desires and expectations of those parties required constant management.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

In this context the first order of business was to configure, recruit and select the project management team; the group that would manage the project and make the day-to-day operational decisions to meet the project objectives. To be clear of this team's role, Turner and Muller's (2003) definition of project management is a good guide: 'an endeavour in which human, material and financial resources are organised in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives' (p. 1). The critical nature of getting this team right is reflected in a comment by one of the client members on the Alliance Board.

The key to success is getting the right capability at management level

(In-project interview: Client Project Controls Manager, 17th March 2010)

4.4 Resourcing the Project

4.4.1 The Alliance's Initial Action

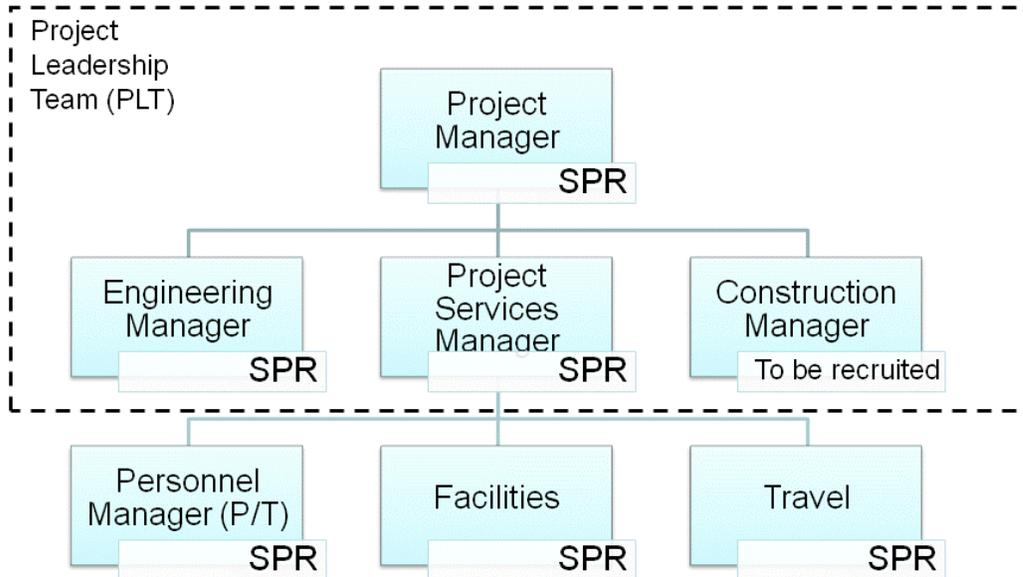
As many projects are seen as one-off endeavours, a number of roles, particularly at a senior level, are often limited to only a few positions. The structure and people-selection of the project management team, called in this project the Project Leadership Team (PLT), was the purview of the Alliance members as they were the ones who, in the proposed arrangement, would nominate people to fill *all* of the roles. Although nominating people to be selected from one's own organisation is not a traditional approach to recruitment and selection, the nature of this Alliance was such that all roles, in particular the senior roles, were expected to be filled by people from the Alliance group. As discussed in Section 1.6.2 because of the unique circumstances of this EPCM project, in which the client took total responsibility for procurement and maintenance and Alliance engineering specialist being solely contracted for engineering, the Alliance was realistically for the construction component of the project only.

It is also part of the head person, Alexander, [starting] to pull together a team and a plan to do this project and [he] had to present to the client a skeleton of a team to demonstrate that they had the resources to carry on the project and how it would kick off once the approval had been given.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

In what the Alliance group believed to be proving their legitimacy through resourcing the project they proposed version 1 of the management structure and began nominating candidates to fill the positions. The Alliance engineering specialist already had a number of people working on the project in a “holding pattern”; thus Alliance engineering specialist, with the implied endorsement of the rest of the Alliance, they proposed a structure for this team.

Figure 4.1 Proposed PLT organisation structure with incumbents - Version 1



Source: HR Records January 2010

All but one position was covered; thus the first gap in the Alliance capability came when they were not able to propose a candidate for the construction manager's role.

The initial approach was to seek suitable candidates from each of the Alliance participants ... and we actually canvassed quite hard and we didn't even find someone, didn't find anybody really in the Alliance partners that could do this role, so we then needed to look external[ly].

(In-project interview: Alliance Board member – Alliance engineering specialist representative, 30th March 2010)

In keeping with the Alliance philosophy, the Alliance engineering specialist volunteered the services of a senior HR person to conduct an external search for a construction manager.

It was expected that each of the Alliance partners would provide people from within their organisations to fill the roles on the team. Well this proved to be a flawed hope in that those organisations didn't have the people - didn't have the people available, and there needed to be a substantial amount of recruiting done by the project to fill the positions on the project...because they don't have the capability to do that. And so it was up to the project team to make up the gap in each of the Alliance partners.

(Post-project interview: Kingsley, Project Director, 18th May 2016).

In what may be considered an anti-egalitarian manner, the Alliance - or at least the Alliance engineering specialist - were very comfortable with their actions due to their position on the project and the energy (and funds) that they had invested to resurrect the project. This reflects an view that Clayton (2012) labels as 'universal entitlement', 'which asserts that membership of a set, (a set of persons or citizens), entitles an individual to a certain type of goods or certain kind of treatment by others' (Clayton 2012, p. 9).

4.4.2 The Client's Reaction

The client considered that they would only get involved in those decisions that affected their legitimacy with those external to the project, mainly the client's board and shareholders. They knew that these external actors needed to have an ongoing belief or feeling that the project was worthy, effective, efficient, competent, and/or needed. Having received the sign-off for the project to go ahead, they were now in legitimacy maintenance.

We have no intention to micro-manage this project. Our involvement is directly commensurate to the confidence in the decisions we are getting.

(In-project interview: Alliance Board member - client representative,
30th March 2010)

No, no and they didn't seek to be decision-makers. They just, they had the opportunity to voice concern, or to express their opinion or veto if you like, but that didn't arise.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

At this initial stage the client needed, at a minimum, for the PLT, to be experienced and educated, hold respected credentials and be credible. The V1 structure proposal and where the candidates would come from did not meet their criteria. The client reacted in a neo-paternal way:

Poor - lacks strong Project Director; they have ignored the baggage; [there are no] project controls; Alliance engineering specialist are looking after their own financial agenda; no Alliance mechanical construction specialist or Alliance civil construction specialist.

(In-project interview: Alliance Board member - client representative,
30th March 2010)

This quote highlights a number of weaknesses in the Alliance. First, the proposed placement of a young engineer who had been a part of all previous project iterations/failures as the project manager lacked credibility. Second, the Alliance engineering specialist, being a dominant part of previous failures, was supplying people for all but one role on the PLT. Third, it introduced suspicion about the lack of equality in the Alliance partnership and suggested a lack of capability, with no Alliance mechanical construction specialist or Alliance civil construction specialist filling any role.

Fourth, there was a need to recruit a construction manager, a role that had been expected to be filled by one or another of the construction specialists. Five, there was no evidence of a 'controls' function in this structure. As one of the Alliance members stated:

If you don't get the controls right you invite them [the client] in.

(In-project interview: Alliance Board member - mechanical construction specialist representative, 18th March 2010)

As there was already an evident need to have a strong hand on the finances, the proposed structure and candidates for the PLT may well have been the critical incident that shaped and legitimised the client's heavy-handed, interventionist approach to most ongoing decisions on the project.

4.4.3 The Ongoing Impact of the Alliance's Initial Action

The proposed PLT structure (V1) and suggested incumbents for these key leadership roles, had two major impacts on the Alliance; it diminished its legitimacy to make quality decisions; and, in some ways more importantly (particularly to stakeholders), it had negative financial consequences. The premise of the Alliance model that was presented to the client was that the three parties to the Alliance could resource the project. Independent of the Alliance engineering specialist's dominance in the proposed PLT, the decisive issue was that none of the three had a nomination for the key role, in which all three had claimed to have mega-project expertise. The engineering specialist in particular, missed their first chance for internal legitimacy and lost the opportunity to exert the positional power they believed they had for future selection and other major decisions in the project. Legitimacy is affected by internal power relations, in the sense that the ability to influence what is considered to be proper decision-making procedures and proper justifications for decisions is a fundamental source of power (Gutiérrez & Magnusson 2014).

Legitimacy and decision-makers' use of it is a key challenge (Gutiérrez & Magnusson 2014). The Alliance now had to face the question of legitimacy in the PLT people-selection process: what conditions would generate acceptable reasons for the selection of a job incumbent? What explanations would be acceptable to the client? As previously cited, Clayton (2012) suggests two conditions of legitimate selection: procedural conditions of a selection policy are decided and administered in the right way; and the decision emerging from the selection procedure must be sufficiently just.

With the client's project director attending the client's monthly board meetings to report on the project, there was a need to strategically legitimise all of the project's actions. Strategic legitimation is a process that deploys evocative symbols to gain support. The organisation can take proactive steps to acquire legitimacy by changing itself and/or changing the environment; for example, by changing the organisations that operate within it. This was exactly the situation in Project North V3, where the Alliance engineering specialist did not invite the main subcontractor from V2 to be a part of the V3 Alliance. Strategic legitimation is defined as 'the purposeful and opportunistic attempt to co-opt, influence, or control institutional pressures and evaluations' (Oliver 1991, p. 157).

The financial impact of not having a candidate to fill the construction manager's role was somewhat paradoxical for the Alliance partners. The Alliance business model had legitimacy for the client, but because each Alliance partner was in competition with the other partners for resources and financial gain (and each reported directly to the client), each partner attempted to legitimise its own position on the project with the client. This phenomenon was also found in a study where proponents explained their view in rational terms and the position of the competitor in non-rational terms such as speculation or personal loyalty to the master figure (Potter & Wetherell 1987); the master figure in project North V3 being the client.

This conflict over resources and legitimacy manifested itself in Alliance members lobbying the client for non-appointment of proposed candidates, even though they did not have an alternative candidate, and urging the commencement of an external search. Ironically, this flew in the face of the primary objective of the Alliance's existence. One researcher calls this 'horizontal political-ethical dilemma....conflicts about power, prestige and cultural capital among groups in, broadly speaking, competitive relationships. Projects in which members of a community try to promote its position viz. other groups which compete in terms of prestige, power and resources' (Alvesson 2003, p. 179).

This brought a new player in to share in Project North financially, as the project, a working entity itself, was now a direct employer. Bypassing all of the Alliance partners meant that no Alliance member could claim their costs plus margin on that resource. Informal cooperation settings are a disadvantage of alliances (Koleva et al. 2002), and Lianying et al. (2016) underline the challenges for alliances of engaging in frequent interaction to foster mutual cognition and trust regarding the sharing of capability, skills and know-how. These weaknesses were apparent very early in Project North.

[It] proved to be a far more challenging and complex offering than is typical...I don't believe any of those organisations would do that again... There wasn't the depth of capability, resources in each of those partners or the consistency of systems to make those resources work effectively and all of that had to be developed on this project to make it work. People [needed to be] recruited and systems developed.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

4.5 Selection Decision-making in Alliance Mega-projects

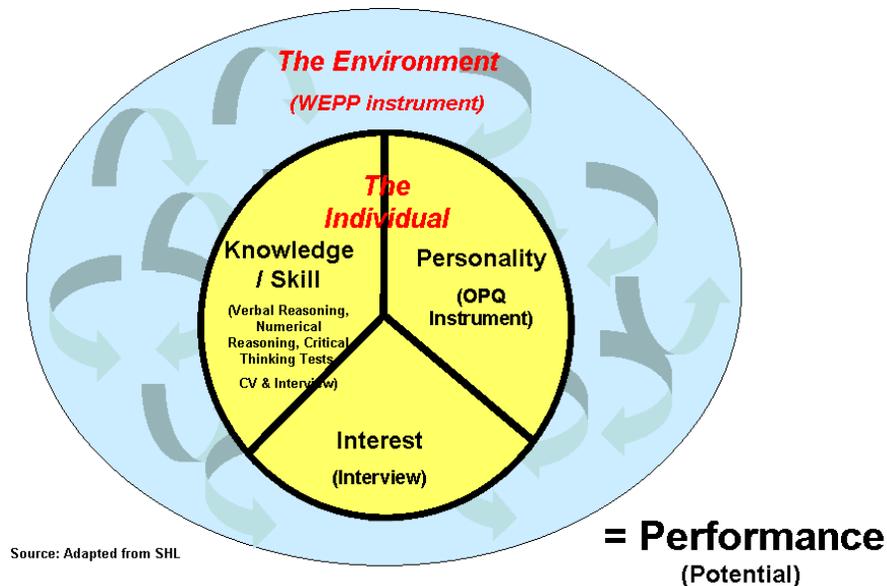
The Alliance model and, in particular, its decision-making process were tainted very early in the project. However, in an alliance milieu, the question is, to what degree does each organisation act appropriately for itself and the type of project in the context of project management? (Thomas & Mullaly 2008). In this case, doing the right thing was the Alliance Board's pledge of 'best for project'. However, it was initially unclear whether this covenant was shared to mutual the success of the client and each of the individual Alliance members, or there were now variations on the vow. What were the right things in regard to people-selection?

4.5.1 The Project Selection Framework

The earlier creation of the project selection framework by the HR manager (who was working as a secondee from the Alliance engineering specialist before eventually being appointed to the PLT in that role), went some way to meet both the client's and the Alliance's strategic legitimisation agenda. The framework also supported Clayton's (2012) procedural conditions of a selection policy being decided and administered in the right way, and the decisions arising from the selection procedure being sufficiently just. There was a process - on paper, at least. It gave face validity to the selection process and the Project North Selection Framework (Figure 4.3) was consistently used as a legitimisation of this process in presentations, particularly to those external to the project.

Figure 4.2 Project North Selection Framework

Selection Framework



Source: Project Protocols presentation 31st March 2010

This selection framework constituted *manipulation* (Suchman 1995) of *regulative legitimacy* (Zimmerman & Zeitz 2002) in that it indicated to stakeholders that the venture was adopting acceptable practices even if the stakeholders knew little about how effective the practices were in meeting the desired end. It suggested a rational decision-making approach where the quality of information enabled people to seek out alternatives, state clear criteria based on preferences and make an optimal choice.

The Alliance group and the project director also maintained the accepted position regarding the selection framework in legitimising the final PLT composition. For example, the Alliance group proclaimed that they used psychometric testing as part of that legitimising selection framework.

I also did psychometric testing on each of the members of my team at the outset. So whilst I had done those tests, members of my team had also done those tests. So the creation of that structure was done in the knowledge of knowing the characteristics of those people.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

'Legitimacy is also assumed if applicants know that assessment methods are fair and just, and skills, knowledge and experience are the pivotal elements to selection decisions' and, 'if rational behaviour guides the selection process in an organisation, it shall also promote legitimacy...and legitimacy is also assumed if fairness and equality in the selection and recruitment procedure is ensured' (Engholm 2001, p. 2). As reflected in the post-project interview with the project director, post-hoc rationalisation of selection methods is another way of asserting legitimacy.

4.5.2 The Validity of the Project Selection Framework

Gatewood et al.'s (2016) schema (Figure 2.3, discussed in Section 2.4) is a conventional approach in developing a selection program. The project's HR manager confirmed that the first three steps in the process were not done. Consequently the development of the selection framework and the purchase of assessment tools were undertaken without any job analysis to anchor the process. 'Where job analysis is incomplete, inaccurate, or simply not conducted, a selection system may be nothing more than a game of chance – a game that employer, employee, and job applicants alike may lose' (Gatewood et al. 2016, p. 248). Gatewood et al.'s (2016) observation was affirmed in this project, where there was no job analysis. For example, the construction manager, was dismissed for performance after four months. The process of his selection is discussed in detail later in this chapter.

The Project North Selection Framework (Figure 4.3) does reflect the three major objects of job-analytic study: work behaviour, work attributes and context (Sanchez & Levine 2012). However, there are alternatives to job analysis. Emerging trends in HR include, personality-oriented work analysis, team and cognitive task analysis and strategic competency modelling (Gatewood et al. 2016). Many organisations have incorporated competency modelling instead of job analysis into their HR practices, and this project selection framework may lend itself more to this approach than the process described by Gatewood et al. (2016). The reasons for this are two of the key differences between competency modelling and job analysis. First, 'executives typically pay more attention to competency modeling'; than JA; and second, 'competency models may be presented in a manner that facilitates ease of use (e.g., organisation-specific language, pictures, or schematics that facilitate memorableness)' (Campion et al. 2011, p. 227).

In the heuristic of the selection framework (Figure 4.3) the individual is located in the context of the work environment. Competency modelling allows for the context to include those behaviours that the organisation is trying to improve, or in this instance, the behaviours that they believe are critical to project success. They may include a collective composed of dimensions of culture or specifics; for example, style of communication or proactivity. The face validity of this selection framework is very high. However, face validity is not a form of validity in a technical sense (Gatewood et al. 2016, p. 146); rather, it serves more to comfort audiences and as the framework was being presented to audiences who were only interested in assessing if the PLT were 'confidently in control', this was all they sought.

4.5.3 The Use of the Project Selection Framework

In this project there was a clear attempt by the HR manager to develop a competency model for the selection of senior project managers. She also sourced highly credible predictor instruments to support the model. Although the selection framework was developed in mid-2009, it is not evident when or if the framework was promulgated to all stakeholders prior to the Project Protocols presentation on 31st March 2010. The HR manager did report, however, that the Alliance's engineering specialist was using most of the tools in the framework for selection prior to this date; not necessarily for the selection of the candidates into the PLT roles, but using them all the same. However, the instruments were used only spasmodically in filling PLT-specific roles.

Table 4.1 Use of selection framework instruments by role

Instrument	WEPP	OPQ	Ability Tests			Interview	CV / Personnel Records
			VR	NR	IR		
Project Director							
Deputy Project Director		*	*	*	*		
Project Services Manager							
Senior Construction Manager - no appointment made - 1 candidate only						Arranged for 16-18/03/2010	*
Procurement & Contracts Manager	No records available - Client employee						
HR/IR Manager		*					
*	Not for current position					As at 12 March 2010	
	External candidate						
	SPR employee						
	OGL (client) employee						

Instrument Key

WEPP	OPQ	VR	NR	IR
Work Environment Preference Profile	Occupational Personality Questionnaire	Verbal Reasoning Test	Numerical Reasoning Test	Intuitive Reasoning Test

Source: HR Manager March 2010 (Identifying colours added)

4.5.3.1 The Use of the Project Selection Framework - Interview Approach

Although no weightings were allocated to the predictors in the selection framework, there appeared to be a strong emphasis, as expressed in both resource allocation and areas of focus, on the selection interview. 'The most important characteristics of a structured interview include using job analysis as a basis for questions' (Gatewood et al. 2016, p. 423).

As stated previously, there was no job analysis conducted with the cascading impact that no knowledge, skills and attributes could be identified to structure or validate the interview before its use. Project HR documents show that no structured interview format was developed and there was no formal process of reporting the results or impressions for collation to assist in the selection decision. It was the HR manager's view that the quality of decision-making strongly depends on a structured arrangement. A note from the discussion with the HR manager reveals that she suggested that the quality would be covered by the quantity. By this she meant that applicants for all senior positions on the project were to be interviewed by the HR manager, the position's immediate manager and the one-up manager. For example, applicants for the construction manager position would be interviewed by the HR manager, the project director, the client and a representative from each of the Alliance partners – six one-on-one interviews in all, and no panel interviews.

The use of multiple interviewers can enhance reliability provided that there is not any influence on their ratings. Moreover, the predictive validity of unstructured interviews could be raised to that of a single structured interview by aggregating the hiring recommendations (Gatewood et al. 2016). It is also assumed that all the interviewers were adequately trained, although HR records confirming this were only available for two of the six prospective interviewers in the example given above.

Many executives believe that they are experienced recruiters and that they can make a decision based on meeting a person for a chat. However, the reality is that an unstructured interview, where a getting-to-know-you chat results in subjective and superficial data, offers no worthwhile input to a quality selection decision. As stated before, it is a game of chance (Gatewood et al. 2016). *Pure judgement* is a method in which judgmental predictor data are collected and combined subjectively for selection decision-making. There is in fact no objective data.

In this instance the only data available to the decision-makers was the external candidate's CV and the data from their unstructured interview(s). At best it was a 'judgmental *composite* method where both judgmental and mechanical data are collected and then combined judgmentally' (Gatewood et al. 2016, p. 215). Either way, the opportunity afforded to the organisation by the quality implementation of the project's selection framework was ignored.

The use of multiple interviewers can help in the quality of the selection decision if there is input from a number of trained interviewers. Still using the construction manager position as an example, two of the Alliance representatives – from the mechanical civil construction specialist – had not met, let alone had the opportunity to interview, the external candidate prior to the announcement of his appointment to the position on 31st March 2010. The HR manager reported that she had prepared her interview for the candidate when he came to Australia in late March 2010 (he was a British national living in Spain); however she did not get to conduct the interview, as the project director advised her that the decision had already been made. Two other people, including the deputy project director, did have the opportunity to have an informal 'chat' with the candidate and both recommended that the employment of the candidate was 'high risk'.

This evidence not only points out the flaws in the view that aggregating hiring recommendations yields increased predictive validity, but also calls into question the unity of the decision-making in the Alliance per se. This demands the question: who made the decision and what selection information was used in making it? The seeming disregard for the use of the competency modelling in making this critical selection decisions suggests that there is something else at play. The result is that the researcher is left with an ex post facto rationalising of a known result. This will be investigated and discussed in detail on a position-by-position basis in the remainder of this chapter.

4.6 The Selection Decisions - Themes and Responses

The research study gave the opportunity to look at the selection process and decision-making not only for the external candidates but for the whole PLT. As stated in Section 3.2, the initial data from the content analysis of the project documents was analysed at a meso-level. That is, at the level of localised meanings and themes within the project, these themes were used to map the data. The project mantra of 'best for project' provided a way to explore how the actors linked (or did not link) their decisions.

The research data analysis suggested four broad themes:

1. Power and Control
2. Legitimacy
3. Project Knowledge Management (PKM)
4. Relationship Capital (RC)

4.6.1 Power and Control

The Project North overarching objective, which was prominently framed and displayed on the wall of every office, worksite, lunch room, canteen and donga (the private room of every employee), was 'Confidently in Control'. This and the *Values* as they were called that supported this objective, were the output of an Alignment Meeting in November 2009. The meeting was attended by at least one representative of each of the major stakeholders and was the precursor for the group that would from then on be known as the Alliance Board – three client members and one representative of each of the three Alliance members – six in all.

Five Project North values supported the 'Confidently in Control' objective: Safety - zero harm to anyone or anything; People - listen, consult and take interest in people; Communication - clear consistent and honest; Productivity - no surprises in cost, schedule or quality; and Best for Project - clear goals that were common to all Alliance members. Notably of the five values, three mirrored exactly those of the client company. This may not be surprising considering that the tabled document, as a discussion starter in the client-facilitated November 2009 meeting, was in fact the client company objectives and values. Individuals at all levels of the project disparaged this as convenient; thus for the client representatives on this project the values were a double-edged sword. Similarly, as the project objectives paralleled the client's corporate objectives, the client's board had an expectation that the key performance indicators would be monitored and reported using similar metrics. This immediately put tension on the compatibility of the project systems and the client's systems, including HR systems of recruitment, performance and retention. This dynamic reflects the research regarding '*power to*' and '*power over*' (Braude 2010).

At the corporate level the client organisation had at least once before executed their *power over* by closing the project down; the client representative on the project not only lived with the potential but had seen this power enacted, and knew that it could be again. There is evidence that power, control, relationship all play some part in the selection process. As discussed in Section 2.4.2, the literature shows a large multidimensional spectrum of the people-selection process: structured, unstructured; decision aided, non-aided; conscious competence, unconscious incompetence; socially processed, authoritarily prescribed.

Working in this shadow the client representatives' *power to* can be generally analysed in terms of resources, both physical resources for the project and resources to make relationships work. It could be argued that the Project North values were more guiding principles than values; whatever the label, it was apparent from the outset that the client clearly was in control of the finances. As Ramirez (1999) points out, in the industrial view of value in business ventures all activities can be measured in monetary terms. As procurement required the biggest spend, this was the obvious place to start in the project. Having control of the two most financially draining parts of the projects - procurements and contracts - seemed both logical and prudent to the client representatives.

There was clearly some aspect of commerciality in relation to avoiding margin and mark-up on procurement and this was an opportunity to do that so we could segregate parts of the project scope.

(In-project interview: Alliance Board member - client representative,

30th March 2010

Having a view on [an EPCM] model that says, 'Actually we are going to carve out an amount of the procurement and the owner will do that procurement, it will run through the owner's books rather than run through the Alliance books,' it certainly contributed to the thinking on the PLT composition.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

The second comment was a statement made more as a client representative than as the procurement and contracts manager. The project director, in his interview (18th May 2016), gave a deeper insight into the selection of the procurement and contracts manager, which was viewed by most as a telling indication of the client's high need to exert power by controlling the finances and in particular, procurement and contracts.

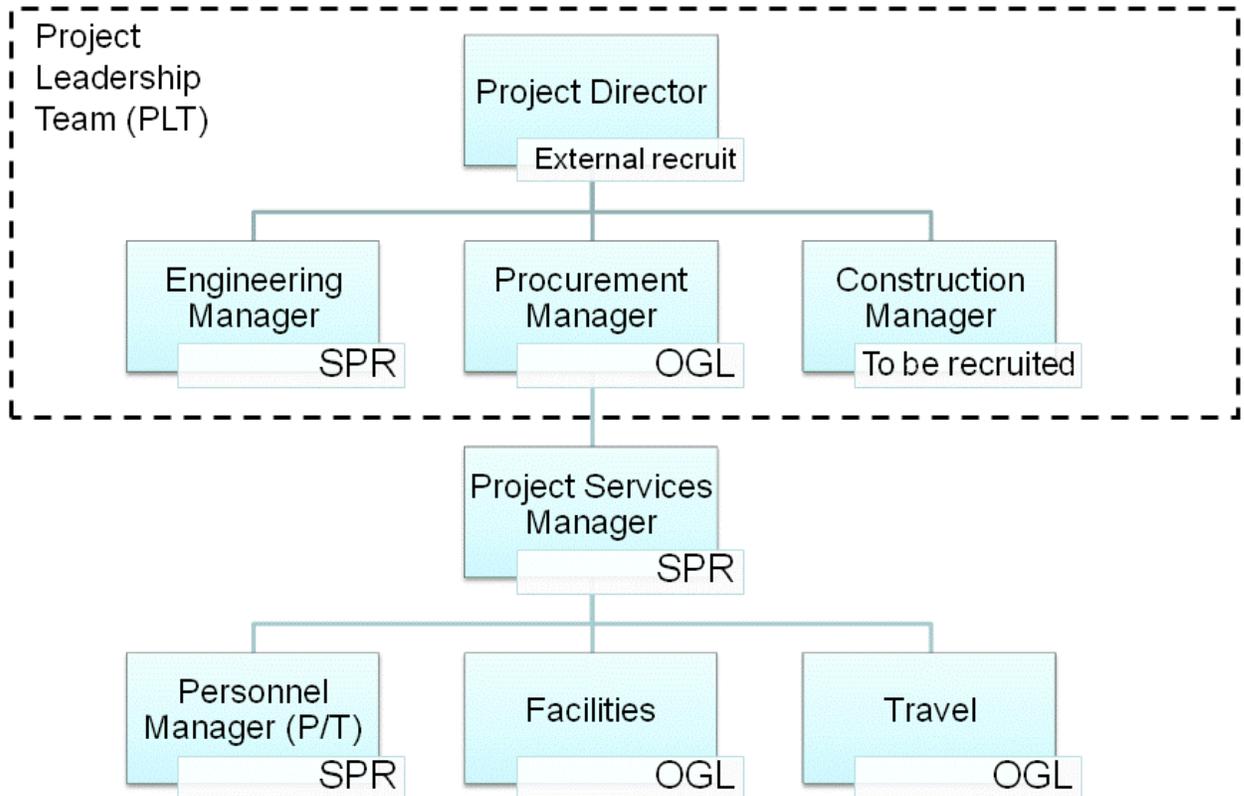
The alliance had involved other partners in prior phases that were not involved at this stage, and it had been poorly managed from a client point of view. And the contractors had actually taken advantage of the client and spent a lot of money [that] perhaps they didn't have to spend; paid a lot more for things they didn't have to, engaged services and purchased equipment from their own stable [of] companies, at inflated prices. And the client was pretty upset about it all. He wanted - and not only keen to ensure that it didn't happen again - he wanted to claw back which meant some unfair and unjust practices, unjust decisions. And that was the background behind the appointment of their own person in procurement, irrespective of the fact that there was a mismatch in procurement systems.'

(Post-project interview: Kingsley, Project Director, 18th May 2016)

Gummerus (2013) suggests that a customer view of value is assessed at a particular point of time. Here, the client's input to the project management process was the product of 'value as experience outcomes' (Gummerus 2013); the experiences of the previous two attempts of the project and the behaviour of the previous alliance partners, some of whom were now part of the Alliance for Project North V3. The appointment of the client's nominee to the position of procurement and contracts manager was a permanent reminder both initially and throughout the project of the client's high need for control. This client nomination was accompanied by a new proposed organisation chart. The client had noted that the original organisation chart (Fig 4.2) recommended by the Alliance engineering specialist did not have the procurement role as a part of the PLT, and that it was dominated by Alliance engineering specialist employees. Behind the titles in the original chart was the responsibility for the project contracts, which belonged to the project services manager.

The second version of the PLT structure, which was proposed by the client, took back control of the PLT and the procurement and contracts function, and firmly planted both the role and its person inside the lead team.

Figure 4.3 Proposed PLT organisation structure with incumbents - Version 2



Source: HR Records January 2010

4.6.1.1 The Alliance's Reaction

The appearance of the procurement manager's role on the client's version of the PLT structure caused further concern for the Alliance engineering specialist. The other Alliance members were more concerned about the other activities claimed by the client - facilities and travel - in this version of the structure. Although all of this was in line with the client's stated objective of keeping their hands on the purse-strings, as shown by the initial proposed structure (Figure 4.2) it was in conflict with the way the Alliance engineering specialist saw the scope of responsibilities for the Alliance.

The proposed structure was also contrary to the way the Alliance engineering specialist had presented the opportunity to the other Alliance members to convince them to come on board to the project. Project contracts for support services like facilities and travel being handled by the Alliance members allowed them to supplement their mainstream construction roles and consequently their income in cash or kind from the services they supplied to the project.

From the selection viewpoint, not only did this take away an opportunity to fill a senior role, but it was contrary to the way the Alliance engineering specialist had seen their employees' roles. The backdrop to the initially proposed structure was that in the interval between Project North attempt two and attempt three, the Alliance engineering specialist had placed their employees in project roles on a full- or part-time basis. For example, they had a dedicated person accounts payable during the hiatus after the second project failure. Both the Alliance engineering specialist and that individual had an expectation that the individual would continue in this role when the project was resurrected. The client, as a part of its governance in the purchase of Company A completed a stock-take of facilities and equipment left by Project North V1. The client person who was brought into the procurement manager's role was strongly reliant on the information from the Alliance engineering specialist employee. The consequent suggested appointment to the procurement manager's role of this client person with the project services manager reporting to them was a surprise to Alliance engineering specialist and very unpalatable to the Alliance engineering specialist person concerned. The project director who had the role of managing the client employee as well as the dynamics of having a client employee on his team, had a very strong view of the selection decision.

So he was no decision for me. The client nominated that they wanted to have their own person manage procurement. Now this is in my view a very intrusive appointment.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

When asked how this appointment fitted with the 'best for project' mantra the project director replied:

Well I ask what does that mantra mean? Why have this mantra?

(Post-project interview: Kingsley, Project Director, 18th May 2016)

4.6.1.2 The Client's 'Power to'

The analysis of the client's power, almost unquestioned, to insert a person into a role should not only be examined regarding its impact on others (relationships) but also as a property or ability. The final incumbent of the role was asked their perspective of their appointment to the position.

I was recommended or proposed by [the client director], as candidate for the procurement and contracts manager, and that was agreed by the [Alliance Board and], the contractor's representatives as well.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

When asked if the Alliance Board members had the power to disagree, he replied:

They did. Absolutely they did. So if they had a different candidate it would have been an opportunity to do that. I guess that's how I feel but they might feel differently.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

The client was very aware that the structure, the role and the person in the role were distasteful to the Alliance engineering specialist, the other Alliance members, other formative members of the PLT and other project personnel; however, when asked about these decisions, the client's representative showed no compunction.

We just said, 'That is what we are going to do.'

(In-project interview: Alliance Board member - client representative,
30th March 2010)

In the research interviews the incumbent was specifically asked about why he thought that there was not a more overt reaction to the decision.

Some of it will have been conditioned by, 'Well this is what the client has said that they want to do.'

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

Both of the last two statements show the real and perceived power exerted by the client in what they saw was their right within the project structure to control the finances, predominately through this role, on behalf of their own organisation and their shareholders. However, if the authenticity for the client's strong hand in the appointment of the procurement and contracts manager was centered on financial control, the question is, to what extent did they use this power to influence other appointments to the PLT?

It was noted that throughout the interview of the procurement and contracts manager that he at times changed hats regarding the roles that he represented when he was on the project - procurement and contracts manager, PLT member and client representative. Early in the interview he was very clear regarding who made the selection decisions for the roles on the PLT.

Without getting confused in the acronyms, the [Alliance] Board made the selection of the project leadership team members.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

The Alliance Board consisted of the client's three members plus one representative from each of the Alliance members. Later in the interview he was asked again regarding the control the client had over the ultimate decision of who would be recommended for positions on the PLT.

The client could reject a recommendation.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

When asked if the power was always with the client, he replied:

Yes. There was absolutely ... there was power of veto.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

This ultimate control by the client over who filled the positions on the PLT was confirmed in the interview with the deputy project director.

'They [the client] approved of it. They were consulted and they did actually veto, in other roles, some candidates.'

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

As the appointment of the procurement and contracts manager was seen as an undeniable indicator of the control the client exerted on the project, the incumbent was also asked whether the decision to appoint him to the role was entirely about controlling the finances or whether he considered himself the best person for the role.

I was not an experienced procurement and contracts manager, so my lack of experience...I did some things wrong in the job...I was learning on the job, so there were some things that cost us time and had impact on the project execution that perhaps someone with more experience wouldn't have fallen in those holes. So the risk that I would make mistakes because of my inexperience, I think, potentially was under...was not considered to the extent that it could have been. They still gave me the job. I am not sure what to make of that.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

The most overt theme from the research was the client imposing their will on the key decisions within the project. Initially the major decision was who would fill the roles on the PLT, the group that would shape the construction and make the operational decisions on a day-to-day basis. This was an exercise in making the decisions about who would make those decisions. In that way the client progressed a long way to fulfilling their objective and cascading the client's corporate objective of being 'confidently in control'. There is evidence that this controlling influence was not always direct or oppressive; nevertheless very well understood.

No, no and they didn't seek to be decision-makers. They just, they had the opportunity to voice concern, or to express their opinion or veto if you like.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

This paradoxical statement characterises power not only as a potential to act but also as the illusion of empowerment. The opportunity to 'voice concern' led to the project director producing five versions of the organisation's PLT structure in the time leading up to 'go live' – (month 0 to month 2) and a further version in the first month of construction (month 3).

4.6.2 Project Knowledge Management

Due to the history of the project, specifically the stop-start of the three attempts spreading over the years since 2005, the challenge for the client was not to lose the investment into what had gone before. Due to the change in both client and some contractors over this period there was no project office, and no structured reservoir of information or history lessons from previous attempts. Some four years into the history of the project there was a Project North Transition Team (PNTT) set up in February 2009 to manage the slowdown, including the mitigation of a temporary reduction in employees. This team's primary focus was to manage through the hiatus brought on by the GFC; however one of its lower level objectives was ensuring key talent was retained.

In the negotiations between the client and the Alliance group to initiate the third attempt, the Alliance reported the status of the project as engineering 50% complete; construction commenced on site; and procurement commenced and information readily available (Melvin, Procurement and Contracts Manager, 8th June 2016, part of the client negotiation team).

It was later reported:

Supposedly this engineering was 50% complete but it had been dropped like a hot potato and rolled all over the floor and all the pieces had to be picked up, and it took some time to pull this together; resources were not necessarily working on our project that should have been.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

With engineering reportedly in this state, the client closely managing the procurement and contracts, the construction site in care and maintenance and the few project knowledge assets at best isolated, the overall status of the project was almost impossible to know. There was no tangible information or IT-based repository of what had gone before or what had been proposed in the project other than internal, mostly commercial-in-confidence, communications held by those involved in the previous project attempts.

4.6.2.1 The Use of Project Knowledge Capital in Selection - Candidate Successful

Specific project knowledge as an asset in Project North was dispersed within networks and individuals and to a large degree, it was at the individuals' discretion to make it available or not. From a business and project perspective, where a great deal of knowledge is tacit and situated in individuals, social groups and situations, this knowledge becomes much more difficult to exploit. Many individuals understood the project knowledge capital they possessed.

I actually started in January 2006. I started off as an area manager, engineering manager and worked to a project manager and I guess part of my long history and knowledge of the project was one of the reasons why I was asked to relocate to take on another role...I guess from the selection process I had almost made myself indispensable in some respect.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

As discussed in Section 2.8.4.1, knowledge expertise due to time on the project alone can be inferred. However, the attribution error in this assumption is that length of time on the project does not necessarily mean greater knowledge. Independent of this potential failing, due to their time on the project, two individuals were considered to have significant project knowledge and were critical to retain.

There were two key people on the project for a year and also in prior phases that were key to the knowledge base of the project...In relation to Phil and Mark let's just clarify this, they were nominated people from the Alliance engineering specialist. They had all of the project knowledge in their systems and in their heads and they were key people in the early phases of the project so you would be crazy not to engage them in meaningful roles.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

There are significant terms in these comments. First, discussing the individuals' and project knowledge, the project director is clear that the knowledge resides in their, the individuals', systems and in their, the individuals', heads, and consequently, it was at the individuals' discretion to make it available or not.

The second significant term is 'meaningful roles'. Phil had an expectation that because of his project knowledge he would be the project director, and this was reinforced by the project organisation structure (Figure 4.2) proposed by Alliance engineering specialist. It became clear with the client revisions to the project organisation structure (Figure 4.4) that this was not their view, and although the client agreed that Phil was key to the project they saw him as a natural selection for the engineering manager's role.

Notes from discussions with the HR manager reflect that, after being asked to take on the engineering role and not the project director's role, Phil, who had already relocated across the continent, asked to be relocated back to his original home and to be taken off the project. Phil stated that the engineering role was a backward step in his career. The HR manager further commented that, to preserve the relationship with the client, Phil was told by the Alliance engineering specialist director on the project that the psychometric testing Phil had undertaken in mid-2009 did not indicate that he would be a good fit for the role of project director. This discussion was reinforced later when Phil declined a request to share the results of his psychometric testing stating that they had been 'used against him'.

When the externally recruited project director joined the project, he was faced with this situation and knew that Phil was key, in the early phases of the project at least.

Phil essentially had been with the project from day dot. He was a part the de-mobilisation...the disassembly of the second-hand plant that started in 2006.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The new project director was also acutely aware that continuity was a crucial factor in the success of the project. Eppler and Sukowski (2000) state that continuity is one of three enabling factors of project-team knowledge management suggesting that a stable team composition leads to high performance in projects.

There are two things here. It is important that there is continuity between phases. There is the study phase and the execution phase. If you have a discontinuity between the two, you can have someone appointed in the execution phase and totally disown something that was done in the study phase such that you win the work, you base your quote, you're quoting on the basis of the study work and then you have the execution person come along and say that's all rubbish, it's going to take twice as long, twice as much, this is unsatisfactory discontinuity. So you do try maintaining continuity.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

In other contexts, in other projects I have sort to make continuity between study team and execution team. And by doing that, people - when they put together the study, if they know that they are going to be responsible for executing it, they will give you realistic projections; they will do the necessary work such that they can be confident that they can deliver what they forecast. I think that that is important. If you don't have that, then that is when projects become shaky.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

Underlying both of these quotes is the 'elephant in the room': as the organisation goes to the external market to fill key roles, internal individuals' project knowledge capital increases, as less continuity equates to less understanding by the new people of what had happened in the past. This is amplified here due to the fact that this project was picking up the pieces of two previous attempts.

Faced with this dilemma, the new project manager was dressed with the role of finding Phil's measures of quid-pro-quo. For PKM objectives to be achieved and leveraged to generate new intellectual capital, four conditions must be met: individuals must see an existing opportunity for combining or exchanging knowledge; they must anticipate value to be derived from the exchange; there must be motivation to share; and the organisation must have a real or perceived capacity to learn or absorb the knowledge (Nahapiet & Ghoshal 1998).

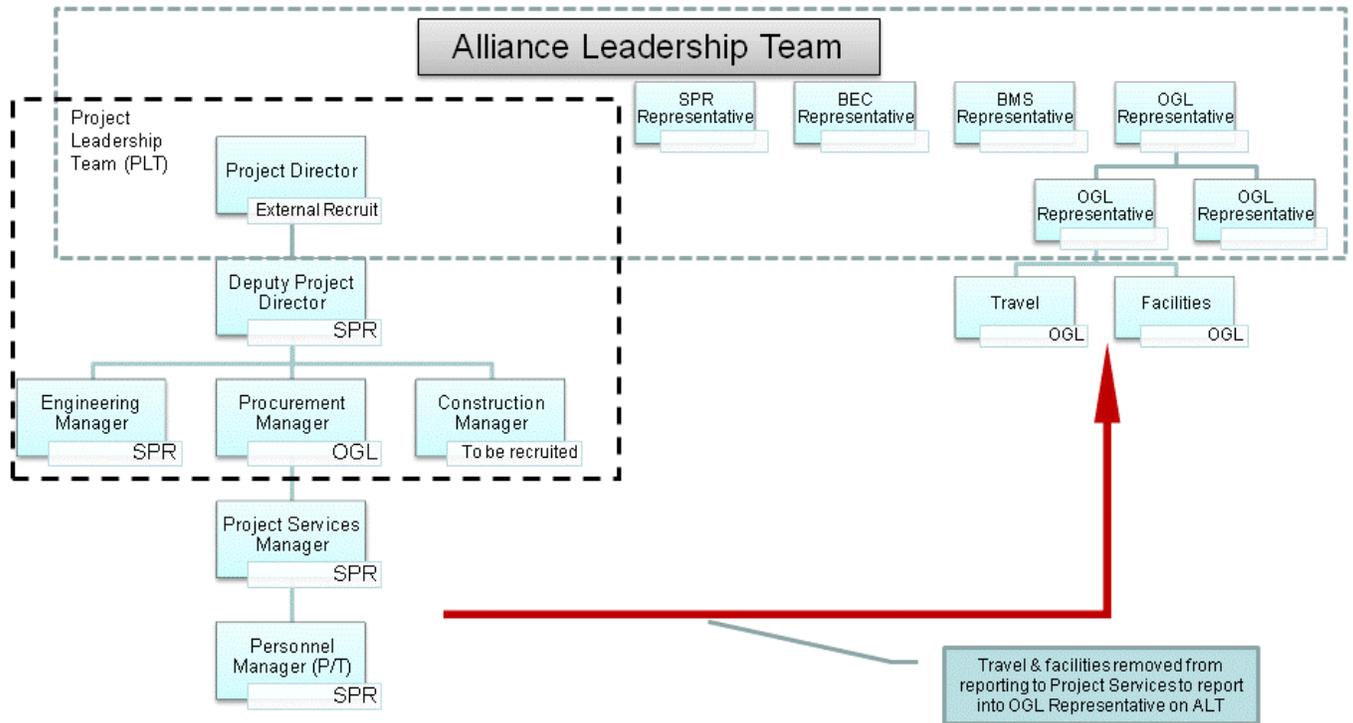
Reflecting on Nahapiet and Ghoshal's (1998) conditions in this case is worthwhile. Phil certainly saw that there was an existing opportunity for combining or exchanging knowledge; he understood the value of the knowledge to the project and understood his own project knowledge capital, but the anticipated value to be derived from the exchange - that is, the expectation that he would be project director - was not forthcoming. What was the motivation to share, and what was the organisation's real or perceived capacity to learn or absorb the knowledge? He believed that if this third attempt was not to go the way of the previous two, it was critical that the project take all of his knowledge on board. With the scenario of Phil's shattered expectations and no meaningful role offer, yet his strong views regarding his own indispensability, the Alliance Board, although they understood the project imperative of continuity, decided that Phil would be a key member of the PLT, but not in what role.

He didn't have a title; he may have had an expectation to be the project director.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The project director put forward a further version of the organisation structure that did appease Phil.

Figure 4.4 Proposed PLT organisation structure with incumbents - Version 3



Source: HR Records February 2010

When asked about the selection decision, including the process and tools that had been used in appointing him to the role of deputy project director, Phil reflected that there was no vex.

So I guess the factors why I was brought on were my experience, my desire to take the next steps as well as my previous history on the projects. For me personally there were no tools [HR selection] tools like that because I was already engaged. The three parties, there was the most senior people of each three of the businesses [who] endorsed that role.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

4.6.2.2 The Use of Project Knowledge Capital in Selection - Candidate Unsuccessful

The parties may have endorsed the role of deputy project director but not the structure. The PLT Organisation Structure - V3 proposal had major ramifications for Mark who had also been advised that he was not to be offered, in his view, his job of right: construction manager. He, too, believed that he had a great deal of project knowledge capital and deserved the role, or at least a meaningful role that included substance, seniority and leadership opportunity.

I was actually part of the build-up for the actual tender, so I was actually part of the process prior to the start-up for actually building the price and all the project controls documents and presentations. Basically the whole set up of the project.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

Mark was offered the project services manager position, and was still considering the offer when the third version of the structure was proposed. Seeing that the project services role was fourth-level management, with no participation in the PLT and that the two most significant responsibilities of the role, travel and facilities, had been removed, he declined the role. Mark had already relocated across the continent and now asked to be relocated back to his original home and to be taken off the project. Significantly, the HR manager began to action his request to return home. This suggested that the project knowledge capital that Mark believed he had plus the project director having stated that 'you would be crazy not to engage them [Phil and Mark] in meaningful roles', (Kingsley, Project Director, 18th May 2016), was still not enough to assure a PLT role for Mark. The significance to Mark of this lower-level offer (project services manager) was lost on some of the PLT and the covert negotiations that followed were of little consequence to them.

So Mark had a role and subsequently was promoted and took a different role in terms of his controls manager.'

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

When speaking of the selection decision-making process for the deputy project director, project services manager and his role, the procurement and contracts manager was appeared unconcerned.

The three of us who started first potentially had...we didn't have a formal appointment process; nobody ran us through psychometrics and put us in an interview room and had us down to the last two and all that sort of fun stuff.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

Although the foibles of the selection decision-making processes for these two roles were discussed in the same interview (18th May 2016) the project director was confident that both the project and the individuals were satisfied with the outcome.

As I said they became natural fits for their roles to start with, so those two were reasonably clear.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

4.6.2.3 Intra-project Knowledge and Inter-project Knowledge

All of the attention regarding PKM in the selection of people onto the PLT was focused on intra-project knowledge. However, the literature overwhelmingly discusses inter-project knowledge. The deputy project director and project services manager, perhaps in a desire to protect their knowledge capital, would suggest that the third iteration of the project was just the next phase. However, others would argue that a new client, new budget, new schedule and some new contractors results in a new project. As stated in Section 1.5.2, the client board certainly did see Project North as a completely new project.

The question of whether Project North was a new project or the next phase of an ongoing project was irrelevant to most, other than those who had a stake in the semantics. The more pertinent question for those recruited from outside of the stakeholder group (client and Alliance members), what was their project knowledge input and, specifically for this study, what part of that influenced their selection to the PLT? Consciously or unconsciously the selection decision-makers had recruited the project knowledge of the external applicants. Overtly, the selectors could access an understanding of the extent of this knowledge through CVs, interviews and reference checks. A little harder to assess was the tacit knowledge the new recruits brought to the project.

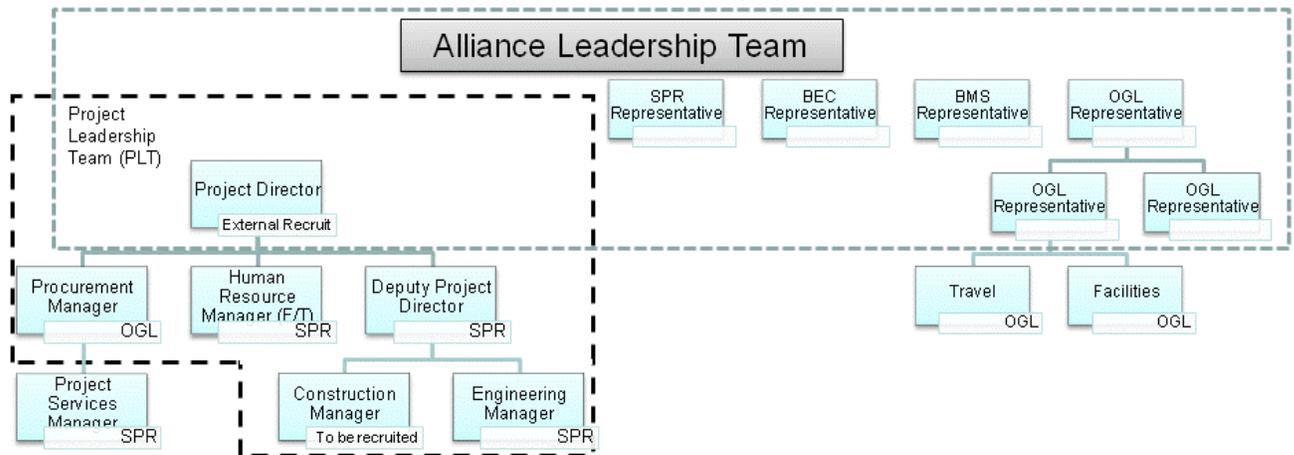
One of the immediate changes to the PLT structure came soon after the project director took up his position. He asked for a full-time, direct report for the position of HR manager.

I think it re-enforces a view I've developed in my days, project experience, that critical element of the success of the project, of any project, is the quality of the execution team. And because the speed and complexity of decision making is in order of magnitude greater than it is in a standard operating environment and we need to resource for this both in terms of the quantity, the number of positions in our chart but also the quality of people we put into our chart. And that is re-enforced to me in this project.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

There was little to no objection as the project to was to 'go live' within one month and 600 trades people needed to be recruited to start on the first day. It was obvious that the most important and urgent activities had to do with the people side of the project. At that stage recruitment was being undertaken by a fourth-level, part-time HR person. The project director proposed that as the HR role was a critical part of the project, it should report to him. The client worked suggested that both people and finances, (specifically, procurement and contracts) were both critical, and both should report to the project director. PLT structure V4 was communicated as the final project structure.

Figure 4.5 Proposed PLT organisation structure with incumbents - Version 4



Source: HR Records February 2010

The PLT structure was again approved; however, the person to fill the HR role was still undecided. Marie, the Alliance engineering specialist employee who had been undertaking the role, albeit on a part-time basis, expected to be appointed to the role. The difference between Marie and the project services candidate was that both the client and the Alliance members considered Marie to have little project knowledge; however, she had in fact worked on the project since February 2009 as part of the Project North Transition Team (PNTT), which made her the candidate with the second longest time on the project other than Phil, the deputy project director. Marie had intimate knowledge of the project but because her role was less obvious to the client her lack of visibility essentially made her an unknown. This candidate would have to earn the role on merit or other grounds.

[Marie] was under a fair bit of scrutiny because she was an unknown entity...We did look at the suitability of Marie versus other candidates [whom] the other clients, the other parties were proposing

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

Three distinct perspectives of PKM were used as inputs to the selection decision for the roles of deputy project director, project services manager and HR manager. The selection influence in the first two roles was the intra-project knowledge that the candidates used as knowledge capital to leverage selection to the PLT. For Phil this was enough to secure a meaningful role as the deputy project director; however, Mark's knowledge capital was not enough in itself. The more common PKM use is inter-project (Owen et al. 2004); in this instance it was introduced when the externally recruited project director demanded that HR role be a part of the PLT. Independent of the depth of Marie's project knowledge, her lack of visibility to the client and the Alliance members gave her little opportunity to use her knowledge to influence her selection to the position. She had been working on the project's HR issues in an office that was completely geographically divorced from both the client and the engineering and procurement group. As described in the interviews she was not a known entity, which suggests that her project knowledge was not enough without proximity to the group of the influencers and decision-makers for her to be seen to have, and to promote her knowledge capital.

4.6.3 Relationship Capital

The post-project interviews consistently included claims that, for five of the six positions on the PLT (the exception being the construction manager), the decision to hire particular individuals was influenced by their direct or network relationships with the selection decision-makers.

For me, purely somebody that you know, somebody that the team has seen...others in the team, or they have worked for somebody else and they have recommended [them].

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

RC has been defined as '[t]he value (real or perceived) of all relationships' (Ecclestone & Field 2003, p. 268). This study asks: what are the characteristics of RC (type, strength, amount needed) required for a candidate to be selected for a position on the PLT. The discussions in the previous two sections - Power and Control and Project Knowledge Management - reported that selection for the position of deputy project director was influenced by project knowledge and the selection for procurement and contracts manager was influenced to some degree by the client's insistence on control in the project, but also by that person's RC with the client (as indicated by the position power, type of relationship and strength of the relationship - all inputs to calculating RC).

The fact that I had the confidence of the client project director was certainly a...it was an unstated expectation that if I've got the client's project director confident in my abilities that's something that [the Alliance Board] should be confident in too.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

Melvin indicated that his relationship with the client project director was a significant reason for his ascension into the role. Was this confidence in his abilities real or just his perception? As discussed in Section 4.6.1.2, the client was emphatic that the role of procurement and contracts manager would only be filled by someone from the client group. However, given Melvin's own revelation that, 'I was not an experienced procurement and contracts manager', (Melvin, Procurement and Contracts Manager, 8th June 2016), was his appointment due to his RC with the client director, or was it just a case of his being in the right place at the right time to support the client's power and insistence on control? As discussed in Section 4.6.1.2, the researcher contends that the selection decision was based mostly on the latter. Given the opportunity in the interview to ruminate on the proceedings leading up to his appointment, Melvin reflected:

So some of it was absolutely opportunity. I was available and familiar.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

For some of the other positions, the influence of RC was more overt. The appointment of the eventual incumbent to the deputy project director's role was, as discussed in Section 4.6.2.1 due to his project knowledge. However, he had internal RC with the engineering group that no other person brought to the project: his relationship was specifically role-based (peer to peer, engineer to engineer) and incorporated both *companion* and *competency* trust (Newell & Swan 2000). Combined with his project knowledge capital, this competency trust was a strong foundation for his claim to a senior position on the project. The number and strength of the touch points on both sides of the relationship between the candidate and the decision-makers gave undeniable strength to the relationship.

This may have been the basis for his claim to be 'indispensable in some respect.'
(Post-project interview: Phil, Deputy Project Director, 10th June 2016).

Later in the interview he explained the process somewhat less dramatically:

I think there were differing levels of scrutiny, because people like myself had been working on the project for so long and we had developed a relationship with the Alliance members and the client team at the time, so there was a level of comfort there already. So the amount of scrutiny for me to take that role on was definitely less than the scrutiny level put on by anybody who didn't have that history.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

The people who were eventually appointed as the project director and the HR manager were introduced to the project through their networks: the former through an external network and the latter a network internal to the Alliance engineering specialist. For both of these people their RC alone was not enough to assure them their respective roles; however, without it there would have been no foot in the door.

I was presented by another person within the Alliance engineering specialist who, someone known to me in the past; someone I'd known since university, actually, and he knew I had returned from the Middle East, had been floating around for a couple of months and hadn't settled on doing something new and he presented my CV

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The role of RC in the appointment of the project services manager is somewhat more complex. It involves real and perceived RC from a number of parties, expectation management, obligation, commitment trust, psychological contracts and reciprocity. As reported in Section 4.6.2.2, Mark was offered the project services manager position, but declined because the role was fourth-level management, outside the PLT and of little substance. There was no role for him to return to in his previous home.

Mark believed that he had played to his strength – his project knowledge - for the project services manager role, but that had been insufficient. Regardless, he believed that he was owed the role. Interviews with Mark never indicated that he understood it as RC; however, when he cited three instances to support his claim to what he believed was owed him, RC may, in fact, have played a significant role. This assertion is supported by the presence in this situation of the characteristics of RC (Table 2.4): obligation, reciprocity and real or perceived relationship capital, as the Alliance engineering specialist CEO had been the face of the Alliance engineering specialist in a complex business situation.

I had just been through a rather complex project. We had a fatality and I handled a lot of different situations.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

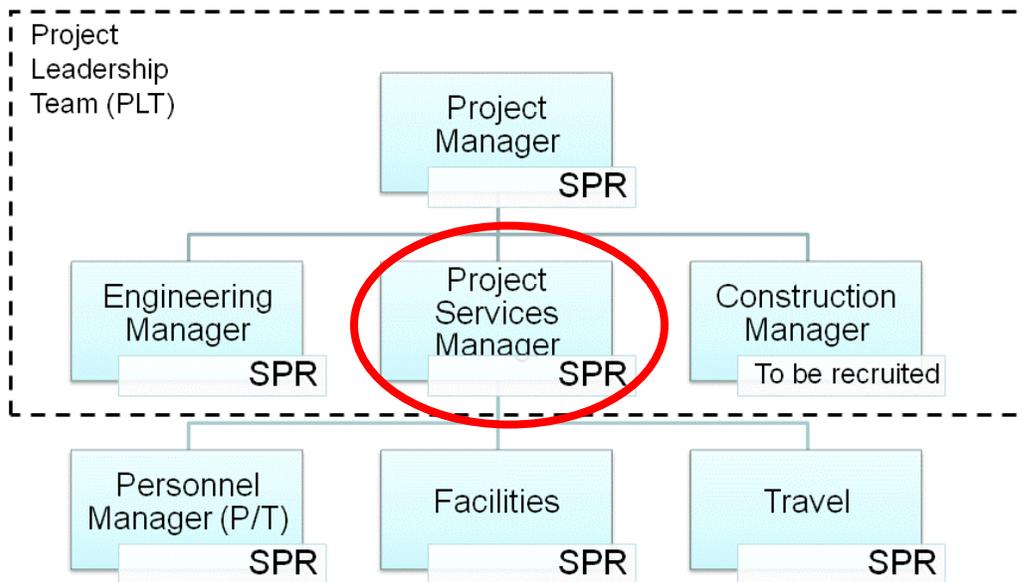
Mark also indicated the presence of obligation, commitment trust and a psychological contract:

The CEO at the time approached me and said there was an opportunity for a rather large project. He at the time thought I wasn't...didn't have enough experience for the site manager's role. He said that the project services role was a good role for me in my career and pitched it at me.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

This demonstrates expectation management, obligation, commitment trust and psychological contract, as the CEO had shown him the draft version of the Project North organisation chart as a part of the pitch to urge him to apply for the project services role.

Figure 4.6 Proposed PLT organisation structure with incumbents - Version 1 – highlight added

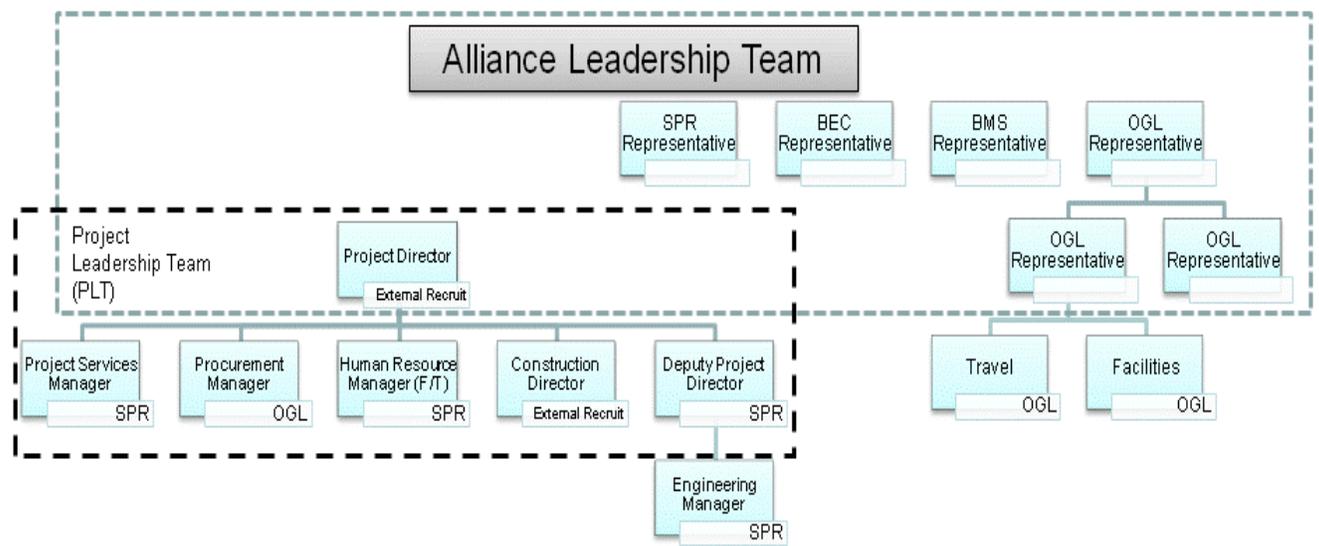


Source: HR Records January 2010

Mark's comments reflect an obvious level of trust and a statement of belief in the strength of the relationship with the CEO. However, as Tansley and Newell (2007) report, trust is not always reciprocal: 'Trust in a supervisor can be defined as a psychological state comprising the intention to accept vulnerability based on expectations of positive intentions or behaviour of the supervisor' (p. 352).

Mark's protestations about the nature of the role had mostly been disregarded until they researched a 'friend in high places' in the Alliance engineering specialist who suggested to the Alliance engineering specialist member of the Alliance Board that the project services role should report directly to the project director. The role was made more substantial with the addition of project controls and accounts, and a new (and fifth) version of the Project North organisation structure was duly communicated.

Figure 4.7 Proposed Project North organisation structure – Version 5



Source: HR Records March 2010

There are obvious benefits to having RC, one being the ultimate securing of a particular role. Indeed, a number of the post-project interviewees highlighted the significant advantages that RC brought to them, and noted that others who did not have RC were somewhat disadvantaged.

I think yet again if we look back through the roles that came later got successively more scrutiny. So as I said, the three of us who started first potentially had...we didn't have a formal appointment process; nobody ran us through psychometrics and put us in an interview room and had us down to the last two and all that sort of fun stuff. I know we did follow that process [for other positions]. There was an interview process, there was a testing and referee review process that occurred, and my reflection on that would be that, that was because they were unknowns - people who weren't intimately engaged and embedded in Alliance parties, if you like. As soon as we stepped outside of their already known and direct employees...there was a formal selection process followed

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

Reflected in this comment is the belief that the procurement and contracts manager, project services manager and deputy project director, because of their relationships, had greater legitimacy in being selected into their role on the project than those who went through a more formal process.

4.6.4 Legitimacy

In section 4.4 the discussion of legitimacy was centred at the organisation level: it concerned the relationship between the client and their shareholders and the new project structure, where legitimacy was a prerequisite and an in-project necessity. This was in the light of previous project attempts, which made the legitimacy-resource-positive progress relationship was especially critical. The overall selection of a quality project management team (analysed in Section 4.5) was a critical part of this. For the individuals involved in this project, legitimate participation in the management team was a requirement for their ongoing careers.

As is evidenced by the post project interviews, the actors in this project were able to post-rationalise the project actions and promote the total project as a commercial success. Working from this platform, the individuals had the opportunity to retrospectively construct their selection, and hence give legitimacy to why *they* held their position on the project.

4.6.4.1 Individual/Personal Legitimacy

Each of the post-project interviewees legitimised their own selection in their own way. For example, the project director said:

I think that there was a reasonably cautious approach adopted in my selection and good measures in assessment in terms of psychometrics etc. Referee checking that was quite well done and retrospectively that wouldn't have shown up anything that wasn't delivered.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

This quote regarding the selection is meant to show some form of normative legitimacy. It highlights rationality in the selection decision, although in reality the selection was achieved through networks that mitigated the liability of newness; in other words, *whom you know* influences judgements. While Kingsley implied that all candidates were treated fairly through testing, the HR records show that the final incumbent rated below average on all test instruments. (Source: HR Records January 2010)

The deputy project director said:

Three companies endorsed my position well before I relocated over. So, I guess really they sort of thought because of the history it made a lot of sense.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

Notably the three companies, who were the Alliance members, endorsed Phil for the project director's role, that decision/endorsement being later overturned by the client. Ironically, in his interview Phil said that the client's veto rights were never used. However, the decision was legitimized through authorisation by people or groups who had power, and whose meanings were validated and accepted as *correct* or *standard* by others (Jackson and Klobas 2008). The rationale was: if the Alliance group endorses my selection, then it must be legitimate.

The procurement and contracts manager said:

There was a vacancy, we were going to have to recruit that key leadership role for the execution and because of my background and experience, the fact that I already knew and understood the vast majority of the procurement packages; I was offered the opportunity to take that role.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

In Section 4.6.3 the perspective of the procurement and contracts manager may be flawed, as the client's motives for appointing a person with no experience in such a role in any project, let alone a mega-project was always under question by the Alliance members and other members of the PLT.

The project services manager said:

My runs on the board previously in the company [Alliance engineering specialist] I suppose were well known. I think they thought I had the right credentials and experience, so I didn't have any ... much HR input in selection. It was more around reputation and previous runs on the board.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

Both the procurement and contracts manager and project services manager claimed *cognitive* legitimacy (Zimmerman & Zeitz 2002) which addresses widely held beliefs and take-for-granted assumptions. In this case the candidates' beliefs and assumptions provided a framework for everyday routines, as well as the more specialised, explicit and codified knowledge and belief systems.

The deputy project director and the project director said of the construction manager's role:

It was a very quick process ... it was a hot market

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

Well essentially it was my appointment. We were reasonably desperate by the time we had to make this appointment because it took some time and we needed to have a lead construction person on site.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

In this appointment the project director was dealing with his own legitimacy to make the decision as, in project terms, the *stage-gate model* (Conforto & Amaral 2016) was not used; that is, the endorsement from the Alliance Board was not sought before making the appointment. However, decisions made in informal ways, as this one was, are generally forced to undergo a formal process later, in accordance with the project values and to placate the Alliance Board regarding legitimacy. In times of uncertainty, instead of choosing the best alternative, decision-makers choose the alternative that exceeds some other criterion (Gutiérrez & Magnusson 2014). In this instance the project director switched paradigms: to mitigate anxiety and frustrations, the hot employment market was highlighted and the project director, describe the context as dynamic with the pending 'go-live' date looming. Placing conditions on the rationale for the decision by reference to other values or reasons is a familiar tactic in moral and political philosophy (Gutiérrez & Magnusson 2014).

The project director, knew the imminent 'go-live' date would appeal to the client, who, unlike two of the Alliance partners had at least met the candidate. Not meeting the first critical date for on-site construction would have been a disaster for the client's legitimacy with their board.

Several interviewees spoke about the HR Manager role:

We did look at the suitability of Marie versus other candidates the other parties were proposing and Marie was the most suitable.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

Marie did face some more competition from the other partners but as I said, at the end of the day the calibre...they couldn't come up with anyone of similar calibre.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

I think that I would say that Marie was probably...was under a fair bit of scrutiny.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

A nomination from Alliance engineering specialist [was] accepted by the other alliance partners.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

Many of these quotes display characteristics of the regulative, normative and cognitive types of legitimacy (Scott 1995). As evidenced by the interviewees' polarising comments and their binary view of legitimacy, they seemed are solely concerned with crossing the threshold between legitimacy and illegitimacy (Zimmerman & Zeitz 2002) and unconcerned with the scale (low to high) of how legitimate the decisions were.

4.6.4.2 Illegitimate Procedure, Illegitimate Decision?

One of the interview questions asked was: did support roles attract more or less attention in the selection process than the line roles of engineering, procurement and construction? The answer was generally no, with most interviewees giving the example of the selection of the project services manager. However, examining the specific discussion on each role individually and as reflected in the quotes above it seems that the HR role did come under a fair amount of scrutiny. This was largely because the construction component of the project was costs reimbursable plus an agreed margin for each of the Alliance partners. In simple terms, the more people, equipment and time that each member put into the project the more profit they made for their respective companies. Understanding that the HR role was the central influencer of staff planning and recruitment, based on the logic of financial consequences and in competition for resources, each member of the Alliance attempted to fill this role with *their* candidate. As discussed earlier, this is a manifestation of the horizontal political-ethical dilemma (Alvesson 2003), embodying conflicts about power and competitive relationships, the paradox of the alliance model.

Although none of the selection approaches goes near to filling Collins's (2012) conditions for legitimate selection, her assertion being that a legitimate procedure gives rise to a legitimate decision, it does not follow that an illegitimate procedure gives rise to an illegitimate decision.

There is support for informal approaches to decision-making, based on interaction and learning; such approaches may be necessary, or at least justified in the presence of uncertainty and unusual circumstances. They fit more with Gutierrez and Magnusson's (2014) view that decision-makers deal with legitimacy by certain mechanisms that allow them to bypass approaches with high acceptance and legitimise decisions made by those with low acceptance. The means-end rationale for a number of these decisions which highlights that a selection might be objectionable, whether or not it is permissible. Most of the interviewees understood the rationale, even if they did not totally agree with the espoused legitimacy of the selection of the PLT members, including their own appointment.

For me that was...I didn't come pre-set, with a set of technical skills but I did come with an attitude and a methodology and a work appetite that meant that I could learn and pick it up quickly. Having said that I made some mistakes and we could have had an even better outcome had we not.

(Post-project interview: Melvin, Procurement and Contracts Manager,
8th June 2016)

However, one interviewee, albeit after the fact, did have very strong feelings about the process.

There should have been official documents so there is no ... at least then a year or two later when you're looking back there is no favouritism, there is no ... it is all just a well-documented, legal process. If you get what I am saying. The old days of just picking people and then moving on should be a thing of the past.

(Post-project interview: Mark, Project Services Manager,
27th June 2016)

This goes to the essence of management credibility and meritocratic selection. Clayton (2012) suggests a flaw in this perspective, what he calls a 'stringency objection' that 'rests on a failure to distinguish between evaluating selection procedures from the perspective of justice and judging them according to the standards of legitimacy' (p. 10). He goes on to say that it does not follow that if a particular selection is unjust it is also illegitimate. Zimmerman and Zeita (2002) suggest that this is a key concept, 'that legitimacy provides a basis for decision-making that is different from means-end rationale' (p. 416). It would seem, from the client's standpoint at least, that there was an attempt in this case to have a foot in both camps; means-end rationale from an internal perspective and legitimacy from an external one.

4.7 Summary

This chapter examined the two broad areas of research investigated: people-selection in a project environment and decision-making in an alliance structure. The findings in both context and processes, defined by the research question, were discussed starting with the context.

The environment or context in which the selection decisions for those who occupied the six positions on the PLT, were examined. The project environment influenced the behaviour of all stakeholders and ultimately underpinned the selection decisions. The Alliance ideal was reviewed and its convener's philosophical view of alliances and his sell-in to the other Alliance members was reviewed in the light of some of the Alliance's initial decisions. The Alliance members' motivation and their opportunity to make decisions, specifically on the selection of the PLT members, was assessed in relation to the behaviours of a highly controlling, non-empowering client.

The selection process and the processes within processes, in particular the decision-making within the selection process of the project leadership team were scrutinised. The initial attempt of the HR manager to bring professionalism and objectivity to the selection process through the development of the project selection framework was examined. Finally, the four broad themes - Power and Control, Project Knowledge Management, Relationship Capital and Legitimacy - emerging from the analysis of the research data as factors influencing the selection decisions of key people in the management of mega-infrastructure project leadership teams were examined individually.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This thesis gives an account of the dynamic context and fluid process of people-selection decision-making hitherto unavailable, and offers case-specific insights into how individuals and groups go about using their power to legitimise their decisions. As a retroductive (similar to critical incident review), ethnographical study, it examined the case of the selection decision-making of a project leadership team (PLT) for an Alliance organisation tasked with the construction of a mega-infrastructure project in Australia.

The findings of this study have been synthesised in this chapter into a concentrated account of the decision-making for the selection of six people into the six positions on the PLT. The chapter asks: why these people (and not others)? How did the decision-making process play out in each case? Although the evaluation of the data in this study is from a unique setting, it nevertheless brings to light a set of concepts that have implications for explaining the process of selection decision-making. This elucidation of the concepts may also provide a potentially fruitful opportunity for future study for researchers interested in socially constructed decision processes in other subject areas; for example, corporate social responsibility and climate change.

5.2 Summary of the Research Process

After reviewing relevant literature in the two main areas of people-selection decision-making - the decision-making *context* and the decision-making *process* - the available documentation from the project, including that gathered before and during project interviews with the key influencers and the decision-makers, underwent content analysis. The initial data from the content analysis was analysed at a meso-level; that is, it examined localised meanings and themes within the project. This data was mapped using these themes. Data validation and selection process gaps were filled by post-project, semi-structured interviews with the key managers themselves and those influencing and deciding on their appointment to the PLT positions.

The case findings are presented in Chapter 4; these comprise the context in which the selections decisions occurred and the explanations of the actors regarding the processes of the selection decisions. The sections in Chapter 4 on the Environmental Context (Section 4.2), the Structural Context (Section 4.3), Resourcing the Project (Section 4.4) and Selection Decision-making in Alliance Mega-projects (Section 4.5) support the understanding of the pertinent contextual factors which influence the selection decisions in this case. The four decision-process themes that emerged were: Power and Control (Section 4.6.1); Project Knowledge Management (Section 4.6.2); Relationship Capital (Section 4.6.3); and Legitimacy (Section 4.6.4).

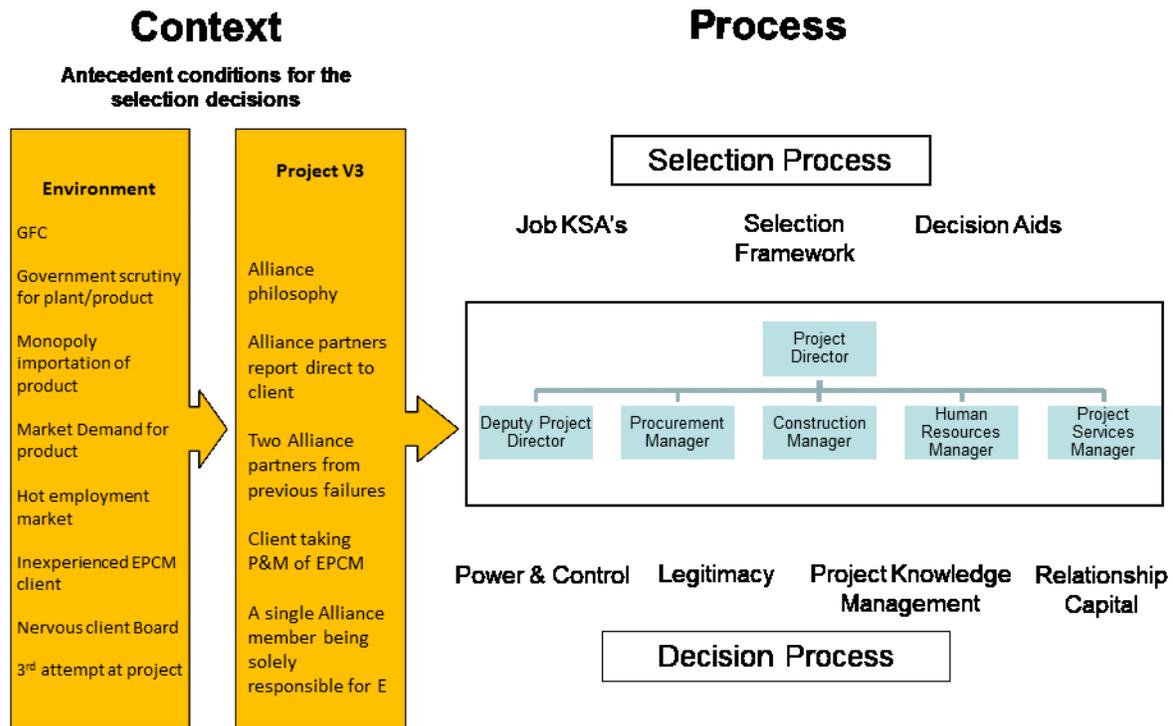
5.3 Summary and Discussion of the Findings Regarding Factors

Bolander and Sandberg (2013) assert that 'existing literature on employee selection contains an abundance of knowledge of how selection should take place but almost nothing about how it occurs in practice' (p.285). Having undertaken a similar review of the existing literature on employee selection, the researcher would support this assertion. However the review cannot support the main findings of Bolander and Sandberg (2013) that suggest that selection decision-making is characterised by ongoing practical deliberation (Bolander & Sandberg 2013). Instead, this study suggests that the selection decision-making is characterised by contextual shaping of mostly latent factors.

The core of the research question is the factors influencing selection decisions in a specific context: alliance-based mega-infrastructure projects focused solely on the PLT. The discussion of *contextual* factors of decision-making as found in the literature highlights that although there has been some research undertaken into the macro issues of selecting alliance partners, there has been little or no study of what happens once those alliance organisations are confirmed (be it in a project environment or not), and how the people to manage those organisations are selected.

Figure 5.1 reveals the findings of this study regarding the factors in the selection of the PLT in an alliance-based mega-infrastructure project.

Figure 5.1 Selection decision factors



The contextual factors are antecedent conditions for the selection decision. The findings suggest two contextual domains. The first is the environment external to the project; this includes issues and circumstances that for the most part the project participants have little control over. The second is the project context, specifically the internal context in which Project North V3 was incubated and operated. These process factors appear as both selection-process and decision-process factors. The selection-process factors reflect some of the conventional approaches to selection, whereas, the decision-process factors have been brought to the surface by this study. The four decision process factors discussed here are not the only factors, nor are they mutually exclusive; however, they have been assessed in the study as significant.

5.4 Context Factors

Contextual factors in this study refer to trends, causes, issues or circumstances that may threaten the success of the project, or even of the client's business. These may be macro, external to the client organisation, including legal and institutional environment factors or they may be internal, for example the business culture led by the Board, whether entrepreneurial or conservative. These are antecedent conditions for all decisions.

5.4.1 Business Environment Factors

The client, as with most manufacturers, placed its business focus on size, economies of scale and capital requirements as integral to the building of structural elements as sources of advantage and drivers of performance (Galbreath & Galvin 2008). The opportunity to enter an already lucrative and growing international market and to provide competition to an Australian monopoly fitted with the client's horizontal-integration objectives. From a strong financial base, the buy-out of Company A in March 2008 gave the client the point of entry into that market through the purchase of the retrofitable chemical plant. At that time the most concerning factor for the client was the Federal Government's scrutiny of the plant and in particular the product it would eventually produce. Government scrutiny had focused on import regulations, not home-soil production. This focus opened up a government/industry/client dialogue that could result in burdensome regulations, particularly in security and reporting, that would bite into the benefits detailed in the client's business case.

The GFC in December 2008 crippled the global financial industry and eventually led to the 2008-2012 global recession (Virakul 2015). Paradoxically, Australia was in the midst of a mining boom; consequently there was a hot employment market. Within this environment, the impact of the GFC was that Project North V2 was abandoned, as the client, who were chemical producers with no experience in building chemical plants, took a cautious approach. The client's ongoing concern with any further iteration of the project was now also with the 'firm factor' versus the 'industry factor' (Galbreath & Galvin 2008, p. 110), that is their company (firm) would be working within the unfamiliar construction industry, the representatives of which had been a party to two previous attempts to construct the project that had been abandoned.

5.4.2 Project Context Factors

Many researchers recognise that a project environment is different from the conventional structure of business; however, there is little examination of the impact of this environment on selection decision-making. Throughout this study Turner and Muller's (2003) definition of project management has been used: 'an endeavour in which human, material and financial resources are organised in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives' (p. 1). The quantitative objectives in this project were stated in this way; 'The Alliance is committed to delivering the North project with zero injuries, under budget and ahead of schedule' (Project North Executive Team briefing March 2010). The perspective of how to deliver these objectives was unusually complicated given the two previous attempts at the project; however, the Alliance engineering specialist, who were contracted from the project's first beginnings, needed to see the project to its completion for both financial and industry credibility reasons.

The managing director of the Alliance engineering specialist, who had initiated the Alliance, had had no previous exposure to or in-depth knowledge of alliance-based projects. He was unaware or completely dismissive of the Alliance characteristics that were described in numerous ways that indicated their complex nature: 'complex organizational forms'; 'viewed as incomplete contracts'; a 'process that is fraught with ambiguity'; consisting of 'detailed interactions between the alliance partners [that] can rarely be fully prespecified' (Anand & Khanna 2000, p. 295); 'qualitatively different from JV'; 'formed by rivalling companies' (Ramu 1997, p. 204); and, 'relationship capital that [causes] the alliance [to be] actually enacted and implemented' (Cullen et al. 2000, p. 224). The Alliance engineering specialist organisation had worked in many projects with hybrid structures, mainly primary contractor and sub-contractor arrangements, but had never worked in any form of alliance organisation to undertake a project. Yet Alexander, the managing director of the Alliance engineering specialist, left no doubt of his belief in this Alliance model he had convened, stating that it would be an 'Australian Business Excellence Process' and that he expected that 'awards' would ensue.

The factors that resulted in this case in characteristics stated above had reciprocal causation and were antecedent in the people-selection and other decisions made in the project. Independent of the organisation structure, there was client discomfort with the fact that two of the three contractors (the Alliance engineering specialist and mechanical construction specialist) were also involved in the previous two failed attempts to complete the project. The managing director of the Alliance engineering specialist attempted to appease the client by replacing one of the contractors who had been involved in the first two attempts with a new civil construction specialist.

Although the Alliance members went to the client with a whole-of-project, turn-key solution, the client took the procurement and maintenance components out of the EPCM project as a part of their response to their discomfort with the previous failures. Another mitigation of the client's discomfort with the previous arrangement was now having a completely separate arrangement with the Alliance engineering specialist for all engineering work to the exclusion of the other two contractors. Consequently, although the Alliance Board was set up to oversee and make decisions on the total EPCM project, the only real decisions were in the construction component of the project. This meant that the partnering firms in the Alliance had a diluted common purpose; this put the Alliance engineering specialist in a dominant position in the Alliance. Also, one of the main characteristics of an alliance is that boundaries are defined by the partnering firms; however, in this case the boundaries were defined by the client. One of the most significant boundaries was that each of the Alliance partners reported direct to the client rather than through the Alliance Board that had ostensibly been set up for such governance.

This reflects that in uncertain situations, prescribed scripts, rules, norms, values and models emerge from social systems (Zimmerman & Zeitz 2002). The client was faced with the uncertainty of the third attempt at this project and they needed the Alliance members to accept their systems - rules, norms, values and models - as legitimate. Social constructivism emphasises that once these structures are constituted, they constrain actors in their choices to within the limits of the prescripts. Social structures have the best hold on actors when they seem to be rooted in the natural order. However this was not the case here. The client redefined the project environment mostly after the contract was signed (note - they changed the environment, not the contract) to support the social structure as it carried their view of delegated legislation from their board and shareholders to all people involved in the project.

The results of the research show that although the client and the Alliance partners said that they were comfortable with the Alliance approach, all four parties went into this arrangement from different thought-worlds. The Alliance Board's belief that they were in control of the inputs, particularly when it came to people, was unsound from the start, not only because of the partners' lack of capacity but also because of the client's high need for control, which affected all selection decisions. The first example to support the client's assertion of control was the Alliance's inability to even suggest a nominee for the construction manager's role, let alone fill it. This caused great concern to all stakeholders, particularly the Alliance and the client.

5.5 Process Factors

Intangible assets and capabilities explain performance variation, while tangible resources do not (Galbreath & Galvin 2008). A critical reason for this is that intangible resources are usually not on the balance sheet, they cannot be protected by legal property rights and they can have a high level of specificity, all of which makes them likely sources of competitive advantage. Quality business processes that manage an organisation's resources are a part of those intangible assets and capabilities. Having these processes in place are required for the organisation's efficiency and good governance.

5.5.1 People-selection Process Factors

Having the requisite human capital is important for project success. Competency-based measures are increasingly being recognised as the best way to select and professionally develop project managers, particularly in the construction industry (Ahadzie et al. 2008). Functional/technical competencies measure performance against output-based measures.

Behavioural competency-based measures underpin levels of performance; consequently, when they are used in the selection process, they have the potential to predict future performance. They are not to be confused with competence (which is output-based): competency, according to mainstream project management practice, means the personal attributes that individuals draw upon as part of their work activities (Mei et al. 2005).

The reason that competency-based approaches have become widely accepted in project management is their strategic importance. The iron triangle - on time, on budget, on spec - as the only measures of project performance perpetuates the myth of projects being one-off, short-term activities with no opportunities for individual career and organisation capability development. Competency-based measures support continuous performance improvement and thus contribute to superior performance levels (Bass 1990). However, behavioural-based competency measures have the disadvantage that behaviours are dynamic and sometimes difficult to identify (Fowler et al. 2000).

The Project North Selection Framework (Figure 4.3) was a competency framework that reflected most of the criteria discussed above. Constructed by the HR manager, during her time on the Project North Transition Team in early 2009, this was her professional attempt to add objectivity and rigor to the selection process. Her HR specialist view was the value-in-use of the framework, and she believed that its use or lack of use in the selection process put into question any value the framework may have had. However for other actors it may have been the exact value they required. The framework's existence allowed the convener and other stakeholders. Both control and legitimacy were scarce and precious, particularly in the early stages of the project. The framework made its first public appearance in the Project Protocols presentation of 31st March 2010.

Although this stretch of the 'value-in-use' concept may not have been palatable to the HR specialist, it gave the illusion of authenticity to the PLT selection process. 'The objective valuation (often) depends on context, e.g. what the environment can supply' (Thyssen et al. 2010, p. 21).

The value to the project under study in this thesis was that without the existence of the selection framework, there would have been no opportunity to gain deeper insights to the decision-makers' conscious or unconscious actions in either process or rationale. For example:

I also did psychometric testing on each of the members of my team at the outset.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

The postscript to this comment is the 'stretch truth' shown in Table 4.1. First, it should be noted that the table, which was supplied by the HR manager, was 'As at 12th March 2010'; in other words, at a time when all but in one incumbent (construction manager) had taken up their new roles. The table shows that only four of the six incumbents were administered any psychometric testing, and for two of those the testing was not done for any particular position on the project. The project director's assertion is flawed at all levels. The HR manager asserted that no knowledge, skills or attributes were identified for any role. Psychometric testing is of value in a selection process as long as the predictor instruments have high validity when they are applied to the knowledge, skills and attributes for the specific role (Wienclaw 2013).

Table 4.1 further shows that the instruments from the framework most consistently used as decision aids were interviews and CV/personnel records. However, again the research findings show that for the most part those interviews that actually were conducted were unstructured, and little more than a 'getting-to-know you chat'. This puts a great deal of emphasis on CV/personnel records as decision aids, but there is little supporting evidence for their proper use. In fact, it could be said of all selection-process factors that many were not available and of those that were, there is little evidence that they were used appropriately if at all to assist in the final decision. This illustrates a perspective presented by Clayton (2012) who stated, 'Whilst a selection procedure can be unjust by virtue of its effects, it can also be unjust regardless of its effects' (p.9).

The literature in this area spotlights bounded rationality and uses egalitarian norms of equality and justice in selection. Further, the morally relevant question of whether the deliberations and motives of the selectors are acceptable as just must refer to the ideal of selectors being moved by the attitude of equal respect toward different individuals (Clayton 2012). Clayton (2012) goes on to suggest that it is sufficient to appeal to non-egalitarian reasons in judging the permissibility of different selections. In this case the evidence suggests that although a people-selection framework and some decision-making aids did exist they were *not* factors that were significant in the people-selection process.

5.5.2 Decision-making Process Factors

Every project exists to support business goals, strategies and priorities. To align with these goals, projects evolve as a result of a decision chain. A pivotal reason for flawed decisions is that many project leaders think about decisions as events rather than processes. 'Decisions are a long social process involving a series of interactions carried out by different people, unfolding over time and across multiple organizational layers' (Rocha 2014, p. 40).

The selection decisions made in this case were incubated in the contextual factors discussed previously in this chapter. The social dynamic between the client and the Alliance partners, and among the partners themselves, unfolded through circumstance, interaction over time and multiple touch-points. Heuristics built up in these conditions as people adapted their rationalisations, making estimations or choosing which logic of decision-making to rely on. Such decisions are not free of biases; however, heuristic and inductive logic may often lead to effective decisions. The factors highlighted in the findings reflect the heuristic and inductive logic of the influencers and decision-makers in this case.

5.5.2.1 Power and Control

The client/contractor arrangement in most projects is based on the principal-agent model; 'the principal (or uninformed player) signs a contract with the agent (or the informed player) for the latter to carry out the wishes of former' (Braude 2010, p. 44). However, although a contract did exist in this project, the perception of the principal as being informed or uninformed was the nexus of the relationship between the client and the Alliance members. The track record of the informed player, the Alliance, suggested that the Alliance members knew how EPCM projects worked. More importantly, they believed that the client did not know; thus when it came to decisions within the scope of the project the client had a credibility gap.

To fill that gap the client used their power. 'Power is a matter of efficacy, the capacity of individual and groups to achieve their own ends and/or frustrate those of others' (Braude 2010, p. 152). The 'best for project' mantra that the client used to justify their behaviour suggests that the client believed that they needed to exercise power over the Alliance against their perceived preferences but in their real interests which were assumed to be project completion on time, on budget and on specification.

The Alliance members, through the power structures of dominance and constraints imposed by the client, were forced into 'organised hypocrisy'; ideas, actions, justifications and hypocrisy as alternatives to control (Brunsson 2007). This reciprocal causation manifested itself for example, in one of the Alliance members lobbying the client not to select a nomination from another Alliance member for a position even though they had no alternative candidate.

5.5.2.2 Project Knowledge Management

Projects need to create an optimal environment for the creation and sharing of knowledge (Jackson & Klobas 2008). Cohesive, innovative teams with members trusting one another and led by empowering leaders will have a higher level of knowledge-sharing (Xue et al. 2011). The Alliance Board and the PLT were a community-of-practice professionals with both inter- and intra-project knowledge that could have been shared for the common good. However the results of this research show that neither the *community* model (Section 2.8.3) nor the *cognitive* model (Section 2.8.3.1) of PKM were evident in this project. Project knowledge, at least as far as the people-selection decision-making went, was seen and used as capital. Because projects are highly task-focused they mitigate against the emergence of actor networks that establish a community based on shared understanding. Moreover, knowledge and learning 'inevitably cut across strong institutional, professional and contractual boundaries and demarcations' (Bresnen et al. 2003, p. 159).

The question that this study highlights is not what was there but what was *not* there to produce the optimal environment for the creation and sharing of knowledge; consequently project knowledge was turned into a mere bargaining chip. Part of the answer comes from the two parties in the Alliance Board - the client and the Alliance members.

Section 5.4.2 asserted that the client was faced with the uncertainty of a third attempt at this project, and that when actors are faced with uncertainty, social systems prescribe rules. This environment of overt position power trumps all other forms of power. The most unpalatable part of this power play to the Alliance members was the lack of respect given to their experience and expertise. This was not conducive to creating a community of professionals. Some of the Alliance characteristics (Section 2.3.1) certainly did not contribute to fostering the optimal environment needed for the creation and sharing of knowledge.

From an individual perspective for PKM objectives to be achieved and applied to generate new intellectual capital, four conditions must be met. Individuals must see an existing opportunity for combining or exchanging knowledge; they must anticipate value to be derived from the exchange; there must be motivation to share; and, the organization must have a real or perceived capacity to learn or absorb the knowledge (Nahapiet & Ghoshal 1998). As discussed in Section 4.6.2.1, these conditions were not evident. Another element that reduced project knowledge to a bargaining chip was the client's limited view of what constituted project knowledge. For them it consisted mostly of technical knowledge of the plant, its engineering and the progress on its construction from the previous two attempts.

The client viewed only intra-project knowledge as valuable, which meant that it could be leveraged by any group or individual backed by continuity and knowledge, the extent of which was assumed to equate to length of time on the project. This project knowledge currency, in this circumstance, was further amplified by the hot employment market. The client's limited perspective gave at least one individual a 'first-picked' entry into the PLT and the opportunity to leverage his project knowledge capital.

I guess from the selection process I had almost made myself indispensable in some respect.

(Post-project interview: Phil, Deputy Project Director, 10th June 2016)

PKM is critical in any project, and inter- or intra-project knowledge would be an expected selection criterion in selection for most project roles; thus it is no surprise that the research highlighted this as one of the factors in the selection of people onto the PLT. However project knowledge should not be limited to individuals' technical knowledge; each individual's knowledge diversity is also of value. For example, in a multi-disciplinary project an individual's knowledge across disciplines makes for both ease and quality of communication and supportive problem-solving processes.

5.5.2.3 Legitimacy

As discussed in Section 2.7.1, broad definitions of legitimacy suffer from some vagueness. However, one characteristic of legitimacy is consistently present, either explicitly or implied, in every definition: that it has a context (Bitektine 2011; Pfeffer 1981; Suchman 1995). The 'best for project' mantra was the client's attempt to define the context for every decision, including the PLT selection decisions.

This mantra defined the legitimacy of every decision by 'formulating its meaning by enumerating the objects or phenomena that fall under the definition of the concept in question' (Bitektine 2011, p. 153); the concept in question here being the decision-making process and the legitimacy of its outcome. For the client this was pragmatic legitimacy, (Jackie & Holub 2003; Zyglidopoulos 2003) based on calculated self-interest.

With external scrutiny anticipated from both stockholders (Friedman & Singh 1989) and the client's board on behalf of company shareholders and stakeholders (Freeman & Reed 1983), in particular the Australian Government and security agencies, legitimacy in a number of forms was critical. *Structural* and *procedural* legitimacy (Suchman 1995) based on the evaluation of the organisation's structure and soundness of procedures and *regulatory* legitimacy (Deephouse 1996) that is - legitimacy with government regulators - were essential.

Based on rhetoric, discursive means and collective action, all characteristics of institutional theory (Biesenthal et al. 2018; Cardinale 2018; Zhao et al. 2017), the Alliance Board members were led by the client to comply with and support, reluctantly or otherwise, of all actions bearing on *external* legitimacy (Kostova & Roth 2002). The impacts on the selection of the PLT were manifold. The overarching rationale was that if the Alliance Board endorsed the selection, it must be legitimate. However, the process of making the decision must also be seen as legitimate. The two most obvious starting points for this were the need for selection *procedural* legitimacy, afforded here by the existence (not necessarily the use) of the Project North Selection Framework and *technical* legitimacy (Ruef & Scott 1998) based on technology, quality and qualifications. Both of these reflect what should be *cognitive* legitimacy (Zimmerman & Zeitz 2002) based on taken-for-grantedness: basic protocols, features or dimensions that would be expected in a project organisation of this magnitude. However, this was not so in all cases. Section 5.5.1 examined the use of the Project North Selection Framework in detail. In people-selection terms its value was in its use. However, in this case its value was in its very existence, as it was used as *pragmatic* legitimacy based on the client's self-interest, and later that of the PLT members themselves, to point to the *procedural* legitimacy of their own selection and the selection decisions they made or influenced. *Technical* legitimacy (or lack of it) may also have been an issue, at least in one case.

For me that was...I didn't come pre-set, with a set of technical skills.

(Post-project interview: Melvin, Procurement and Contracts Manager,

8th June 2016)

As discussed in Sections 2.4.2 and 2.7.1, evaluations of organisational legitimacy involve bounded rationality, along with cognitive and socio-political issues.

Legitimacy as a property conferred is distinct from legitimation which emphasises the process of social construction of legitimacy (Bitektine 2011). The findings from the research suggest that the decisions made in selecting people for the PLT were made emphasising the process of social construction of legitimacy: a decision-legitimation process that emerged from the individual organisation's norms and logic. The choice between seeking more information to make the decision and using heuristics and inductive logic does not appear to have ever been a part of the decision-making process.

5.5.2.4 Relationship Capital

As discussed in Section 4.6.3, in the post-project interviews there was a consistent claim that, in five of the six positions on the PLT (the exception being the construction manager), decisions were influenced and people given positions (or not) due to their direct or network relationships with the selection decision-makers. Relations within the context of cognitive and sociopolitical issues all put pressure on the theoretical model of selection decision-making. Commitments (actions) and perceptions (thoughts and feelings) are interactions that help define relationship capital (Peters 2015) and create physical and psychological touch points between entities, including people, businesses and products. This definition opens up how groups or individuals who have or believe they have capital derived through a relationship may use that capital.

This study found that RC was used to varying degrees ranging from none to extensive in selecting the PLT members. RC was based on trust on the part of either the candidate or the influencer/decision-maker (or both): for some it was *competence* trust, and for others *commitment* trust (Newell & Swan 2000). Employee recommendations used in conjunction with other methods are a commonly used source in recruitment to gather a group of candidates for selection. The use of employee recommendations as a selection cast-net or a 'foot in the door' is for the most part legitimate. Both the project director's role and the HR manager's role were recruited in this way. The *competence* trust from their networks was based on an attitude of respect for the trustee's ability to undertake the task at hand.

In two other instances, the selection processes for the procurement and contracts manager and the project services manager were based more on *commitment* trust. The former was based mostly on a formal agreement: the candidate's employment contract, which made him a client employee first and a member of the PLT second; and the commitment trust was based on the parties' expectations that, through cooperative relations, there would be mutual benefits.

So he was no decision for me. The client nominated that they wanted to have their own person manage procurement. Now this is in my view a very intrusive appointment.

(Post-project interview: Kingsley, Project Director, 18th May 2016)

From these perspectives, RC is seen as organisational political capital (Landells & Albrecht 2013). The selection of the project services manager was also based on *commitment* trust but psychological rather than contractual, still strongly based on the parties' expectations that, through cooperative relations, there will be mutual benefits.

The cooperative relations in this case were things that the candidate had done in the past, as explained in Section 4.6.3, and for this obligation, reciprocity, psychological contract and real/perceived relationship capital was currency for the expected appointment to a role on the PLT. In contrast to social capital, where psychological contracts are honoured and where genuine and positive reciprocity is central to the concept, as Tansley and Newell (2007) report, in RC, trust may not be reciprocal.

5.5.2.5 Summary of Decision-making Process Factors

Male et al. (2007) discuss value management as an approach to auditing decisions against a value system determined by the client. However, in this case value involved more than a client-centric, narrow industrial view based on the 'iron triangle'. All of the decision-making process themes from this case's research incorporate perspectives of value. RC and PKM are by nature value constituents. Legitimacy along with power and control as discussed previously, were objectives of many of the actors in this project. The interactions between these themes reinforce and amplify each other when they come together in the project dynamic. In the most positive sense, this is exactly what the managing director of the Alliance engineering specialist had in mind when boasting at the outset that the new Alliance model would be an 'Australian Business Excellence Process'. He believed that the advantages and value of relational partnerships as an alternative to traditional project-delivery methods were yet to be realised by the wider construction industry. However, for this relational partnerships delivery mechanism to be successful all parties need to work together as a cohesive team to achieve an agreed outcome (Doloi 2009). That was not the view of the client.

The accounts of the selection decisions (Section 4.6) reflect an overt, overarching premise for the client's high need for control over most, if not all, decisions, independent of the quality of or trust in those decisions. Sections 4.6.2 to 4.6.4 are tied strongly to the initial theme of Power and Control (Section 4.6.1). Closer examination of that power shows that it can influence cognition-based trust even though affect-based trust has a significantly greater positive influence on cooperative performance (Lu & Hao 2013). In the context of this project, the need for affect-based trust was something that the client either was unaware of or believed to be unnecessary, as they had client-rights (that is, veto power) over all decisions, and were able to impose their own definition of what was of value on the project.

As far back as Perry (1914) researchers have attempted to create a broad definition of value. In this case each of the eventual incumbents of the roles of the PLT were clients of the broad project recruitment and selection process. The nuisances and quality of that process may have little relevance when the parties in that endeavour - the Alliance and the client - were willing to accept the resulting product and, for the most part, use it to create their own constructs of worth. To all of the stakeholders the components and features of the selection decision-making process were somewhat moot: because they were actors, in part or full, in the input, process and output of the selections, they were complicit in the impact of all promulgation - personal, organisational and environmental - both during and after the project.

5.6 Summary of Selection-decision Factors

Normative selection approaches in this project are difficult to identify. The dynamic processes that resulted in each individual's selection into their particular role suggests that stockholder, stakeholder dynamics, client power-in-use, leverage of tacit knowledge and the use and abuse of relationships were more prominent factors in selection decisions. The risk of bias in decisions, a lack of transparency in decision-making and activities that altered the planning of resource allocation contributed to the end result. Such interpretations may be appropriate and sensible within the perpetrators' means-end approach, but difficult to defend legally, ethically or morally. However, deeper analysis of the case evidence raises the question: were these internal power players in the project the puppet masters or the marionettes? 'The involuntarist nature of conditions' and consequently 'the involuntarism of action and reflection available to actors' (Taylor 2006, p. 484) address the antecedence of context for selection decisions. Context both external to the project environment and internal to Project North V3 inflates the role and status of the individual in the constitution of social reality through interactionism (Archer 1995).

5.7 Thesis Summary

The decision-making literature recognises the critical role that organisational context plays in providing antecedent conditions for decisions (see, for example, (Clayton 2012; Gutiérrez & Magnusson 2014; Landells & Albrecht 2017). Chapter 4 examined the situational, environmental and contextual setting in which the selections decisions were incubated. An appropriate parallel in history is the Star Chamber, where the context may quasi-formalise, if not legitimise, the client exercising domination, a particular form of power-based on neither incentives nor sanctions, that enables authorities to shape behaviour (Levi et al. 2009).

The Star Chamber, which became a synonym for secrecy, severity and extreme injustice, had its origins during the personal rule of Great Britain's Charles I, when the Court was used to coercively enforce laws against religious dissent and seditious libel. The Long Parliament abolished the Court on the grounds that it had exceeded its jurisdiction, permitted its proceedings to become arbitrary, and inflicted cruel and excessive punishment (Zande 2008). Similarly, while the client representative on the project would not agree that they exceeded their jurisdiction or 'inflicted' anything that they did not have a right to, at a minimum their 'social norms' were invoked and imposed on others.

As the study is of one case, the findings and conclusions are organisation-centric and situation-centric. However, this chapter outlines the study's contributions to the selection decision-making literature, albeit in a specific set of circumstances. This interpretivist research is undertaken on the in-practice decision-making in the selection of alliance-structured, mega-project leadership teams, where until now little has been done (Bolander & Sandberg 2013). This study shines a light on the real-world practices of selection in these specific environments and gives some insight to the success or otherwise of some of these practices.

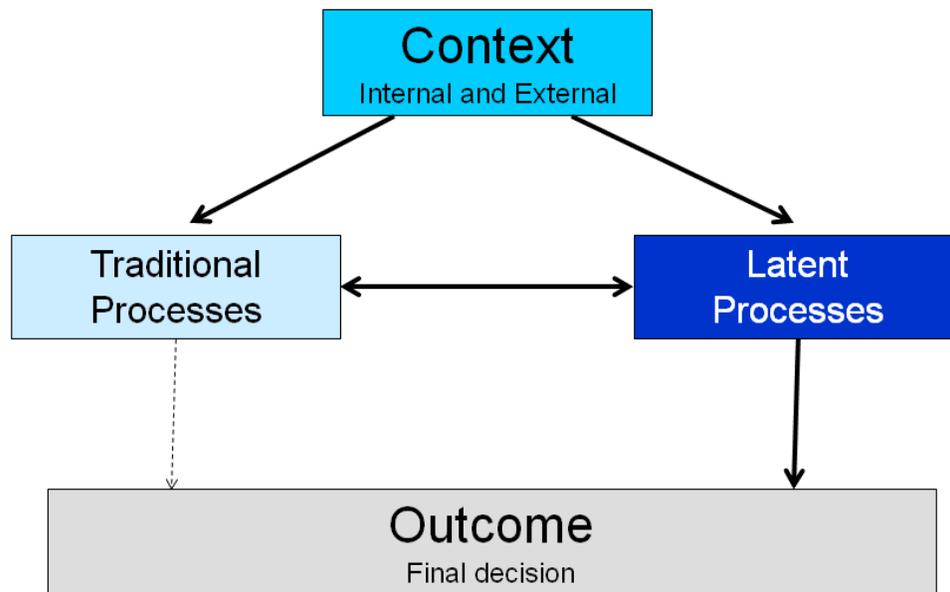
5.7.1 Contribution of the Study

This study has presented an account of the findings from one case regarding the factors that influence the selection decisions for leadership teams in an alliance mega-infrastructure project. The unique details such as the conflict between the client and the Alliance members over the selection of specific individuals may have little or no significance for interpreting other cases of people-selection. However, the notion of context - external and internal - significantly impacting selection and decision processes can be taken as an explanation of the general process of selection decision-making in mega-projects.

Context, as a point of departure for the ultimate decision, incubates the conscious and sometimes unconscious bifurcated path of traditional and/or latent processes taken.

In an attempt to generalise the learning from the research Figure 5.2 gives a synoptic heuristic of figure 5.1, showing the paths and interactions of context and processes that prefix a final decision; in this case the selection decision. The figure (5.2) extends the understanding of the decision-making process, including implications beyond the project management discipline.

Figure 5.2 Overview of selection-decision factors



This study suggests that selection decision-making is characterised by contextual shaping of mostly latent factors, hence the solid line from context to latent processes to outcome. The dotted line between traditional processes and outcome reflects a weaker influence on the outcome due to heavy influences from the context and latent processes. The contextual factors are antecedent conditions for the decision.

The selection-process factors reflect some of the conventional approaches to selection, whereas latent factors have been brought to the surface by this study.

Returning to the literature, traditional people-selection and decision-making processes (Gatewood et al. 2016; Sanchez & Levine 2012; Schippmann et al. 2000) often encompass approaches to the processes that specify sets of rules and heuristics. Practitioners often describe difficulties that they experience in the application of these methods; it is thus unsurprising that others build their own heuristics to adapt their rationality, making estimations or choosing which logic for the path they will rely on for their required outcome. As discussed in Section 5.5.2, these heuristics and inductive logic may often lead to effective decisions.

In the future the themes highlighted and examined in this study - power and control, project knowledge management, legitimacy and relationship capital - may or may not be significant, nor of the magnitude that brought them to the fore in this study; however, this study does reinforce that latent factors will exist in all decision-making processes and will shape the ultimate outcome. These latent factors may not always be ethical, moral or legal yet they may still be effective as a means-end rationale and give a pragmatic view of decision-making.

Section 1.3 explained that there is little interpretivist research on in-practice decision-making in the selection of project leadership teams (Bolander & Sandberg 2013). This study, through real-world practices of selection in a specific environment, shone a light on the success (or otherwise) of some of these practices. A summary of the theoretical (table 1.1), methodological (table 1.2) and substantive (table 1.3) contributions of this study was set out in section 1.3 and these contributions are expanded below incorporating collaborating discussions the findings of this study.

Table 5.1 (T1) Theoretical contributions

T1	Examining latent agendas of the stakeholders adds to our understanding of key factors in the selection decision-making process.
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Scholars in the area people-selection 'are concerned with organisational and social dynamics that recruitment and selection support and reflect rather than managerial efficacy of activities' (Taylor 2006, p. 481). This case reinforces Taylor's theory that selection is a social process that is affected by and has effects within and beyond organisations. It extends this theory by demonstrating that latent agendas override conventional people-selection processes and are legitimised through the lens of the stakeholders.

Table 5.1 (T2) Theoretical contributions

T2	Extending understanding of how contextual factors impact on selection decision-making in project leadership teams.
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This study demonstrates that situation, stimulus and context all play crucial and complex roles in selection decision-making processes. The study extends current selection theory, which as shown in chapter 2 privileges job analysis and people-organisation fit, by suggesting that selection decisions are strongly influenced by context and the decision-makers' mindset is both shaped and shapes the context.

Table 5.2 (M1) Methodological contributions

M1	Retroduction used at a meso-level to identify how decisions are made in the process of selection of the Project Leadership Team (PLT).
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As stated in section 3.3, this study was conducted in a social constructivist paradigm, valuing the premise that to gather data only from respondents ‘ignores all facets of events that are carried not in person, but in the situation, stimulus, or context’ (McGrath & Brinberg 1983, p. 122). This study not only supports this view but advocates that any methodology in a study of this type must incorporate a thorough examination of the context in which the study is being assayed. The study expands the social constructivist paradigm into the unique situations, stimulus and context of mega-projects.

Table 5.2 (M2) Methodological contributions

M2	An empirical example of the use of how multiple sources of data collection can be used in a retroductive study.
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As stated in section 3.4, it is clear in this study that situation, stimulus and context all play crucial and complex roles in input, process and output of the selection decision-making processes under study. To not accept and value inputs from all relevant sources, decision-makers, influencers, recommenders and all content available would downplay the rich vein of data and perspectives in this study. The secondary data utilised by the researcher was a critical input to the study.

Table 5.3 (S1) Substantive contributions

S1	Adding to the study of selection in project leadership teams by empirical data from an insider's perspective.
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The evidence in this case supports previous research that 'structural conditions and expectations of rational action need not be followed by managerial agents; indeed they are often actively avoided, undermined or ignored' (Taylor 2006, p. 481). The dynamic of project/client/alliance/business environment exponentially impacts the commercial situation and as a consequence the subtleties is the critical starting point for any similar study. The contribution of this research is identifying the distinctive dynamic in the mega-project environment.

Table 5.3 (S2) Substantive contributions

S2	Broadening the debate on leadership selection in the project environment.
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The accounts of the selection decisions (Section 4.6) reflect an overt, overarching premise of the client's high need for control over most, if not all, decisions, independent of the quality of or trust in those decisions. All decisions were made under the ubiquitous cloud of client rights (that is, veto power) over all decisions. The uncompromising client-centric decision-making power, privileges the client's rights, including the client's right to success (or failure) in a mega-project.

This finding contributes to the literature in that it substantially changes the focus from rational decision-making to power-based decision-making; the study suggests that managerial prerogative subverts rationality in the selection process.

Table 5.3 (S3) Substantive contributions

S3	Providing empirical evidence of the phenomenon of selecting for project leadership teams from the standpoint of alliance organisations.
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As stated in section 4.5, in the alliance model of a project the question is, to what degree does each organisation act appropriately for itself and the type of project in the context of project management? (Thomas & Mullaly 2008). In this case, doing the right thing was the Alliance Board's pledge of 'best for project'. The client's domination of most decisions and the structure of each alliance member reporting directly to the client blurred the opportunity to examine selecting project leadership teams through the uncontaminated intra-alliance member dynamic. This macro perspective phenomenon is insightful of alliance organisations in decision-making, including the selection of project leadership teams in mega-projects.

5.7.2 Limitations of the Study and Suggestions for Further Research

As stated in the opening chapter, conventional wisdom that a case study cannot provide reliable information about the broader class 'is so oversimplified as to be grossly misleading'...'if not directly wrong' (Flyvbjerg 2006, p. 220).

Understanding the implications for the functioning and consequent success of multidisciplinary project teams highlights the critical need to reconceptualise their boundaries (Ratcheva 2009); this study set out to help reconceptualise the boundaries of selection decision-making as it applies to alliance mega-infrastructure project leadership teams.

Approximately 4% of the total global GDP (USD 3.4 trillion per year) will be spent on global (mega/giga) infrastructure projects for 2013-2030 according to the McKinsey Company (McKinsey 2013). Similarly it was estimated that in emerging economies alone, USD 2.2 trillion annually would be spent on mega-infrastructure projects in the period 2009-2018 (Economist 2008, p. 80). Despite the exponential growth of these projects globally, research into mega-projects is sparse. What research that has been undertaken does not take into account the selection of the leadership teams in these projects. The researcher, as expressed in the summary (section 2.10) of the literature review, rather than viewing this as a limitation, saw this as an opportunity to add to the discipline.

The researcher had the privilege of being able to conduct insider-research (Brannick & Coghlan 2007) through being employed as a consultant to work *on* the project rather than *in* the project. In methodology terms the limitations of ethnographic work are well researched (Alvesson 2003; Hammersley 1990; Seru 2014) and the researcher's mitigation of these limitations were discussed in detail throughout Chapter 3. However, 'hardly any social setting comes out of an ethnographic study unblemished' (Alvesson 2003, p. 180). Ambiguity is a state of confusion not necessarily related to the amount or quality of information but more to the way the information is interpreted.

As an applied piece of research, a researcher's conscious understanding of closeness and distance is critical to both the researcher's interpretation of the data and the ultimate value of the research. The value of self-ethnography is that it immediately establishes a scope of the study, that being the setting being studied; in this research this was the specific case under examination.

Consequently the researcher and the ultimate readers of the study findings can be clear from the outset about the limits of the findings. No matter how conscious researchers are of closeness and distance, their set of observations, as such, are perspectives that only represent a partial view of events and that the interpretations are inevitably coloured by their own values, interests and background. The dangers of this are a narrow line of sight and lack of objectivity creating bias.

In the context of this study, McGrath and Brinberg (1983) note:

'The individual researcher, carrying out a study that fits his or her interests or purposes, is in no way obliged to conduct research along any other path or in any other portion of the research "space" than the one proposed. The individual researcher is obliged only to do each study as well as possible within the available resources, and to present it publicly for what it is: one study, in one part of the overall research processes, bearing on the state focal problem in certain limited ways'
(McGrath & Brinberg 1983, p. 123).

None of these limitations is fatal and the researcher has been conscious to mitigate where possible the limitations in scope, methodology, findings interpretation and contributions. The researcher has taken a scholarly and reflective attitude in regard to the study and in doing so has returned meaningful insights.

The contribution of this study is in part practical - giving a perspective on decision-making and a practice orientation regarding selection in a specific environment - and part theoretical in its application of project and selection domains. The opportunity that this study highlights is that, rather than focusing on the technical or economic efficacy of selection practices, future research can explore the ethical or political effects of this managerial activity, not only in people-selection decision-making but in the broadest form of stakeholder influence, agreement, recommendation and ultimate decision.

This study has shown that complex factors influence the way senior leaders are chosen for mega-infrastructure projects. Orthodox selection processes do not adequately explain how such appointments are made. This study, using a combination of semi-structured interviews, documentary evidence and insider observations of the team-formation processes, asserts that latent factors affect selection decisions more so than the espoused traditional selection techniques.

These latent factors, such as the relative power of key stakeholders, the commitment of key decision-makers to long-term learning from alliance partners, and the nature of the relationship between alliance partners, are rarely considered and difficult to measure. Having highlighted these latent factors there is opportunity for further studies into these and other factors that influence the selection decision-making processes not only in mega-infrastructure projects but other decision-making environments.

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