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Mega-Project Governance – A Case Study of the Governance of a Successfully Delivered Project

Nick Pelham, University of Melbourne, Australia
Colin Duffield, University of Melbourne, Australia

Proceedings Editors
Jessica Kaminsky, University of Washington and Vedran Zerjav, University College London

MEGA-PROJECT GOVERNANCE – A CASE STUDY OF THE GOVERNANCE OF A SUCCESSFULLY DELIVERED PROJECT

Nick Pelham[1] and Colin Duffield[2]

ABSTRACT

While there is a growing body of knowledge on the subject of project governance the relationship between governance structures and the function of a project board is not strong. Conventional knowledge suggests that when a project fails, one of the root causes is poor project governance. This paper explores the concept of project board performance and the importance of dynamic institutional arrangements of governance in managing a project over its lifecycle.

To answer the research question of which issues does a project governance body need to address to deliver a successful mega project, a qualitative methods research approach was adopted. A project board's performance was explored using an Australian mega project case study. The Board and its sub-committee's documented minutes and reports over a six year period were reviewed and analysed to understand what issues required close governing.

Findings from the study include: the value and importance of having project governance implemented prior to the start of a project; that the form of project governance may sensibly change over the project life; and novel governance structures can deliver enhanced value. Structurally, the case study project was designed with a single point of accountability, the Project Board acted in an advisory capacity only.

The study reinforces the importance of active, persistent and proactive approaches to project governance, with a strong focus on project status reporting and risk management. The findings suggest that a project board significantly contributes to the success of mega projects as it may manage numerous issues and risks by implementing a consistent reporting framework and proactive risk management approach. Importantly, project governance structures for mega projects are far more dynamic than previously understood as they necessarily change over a project's life to effectively manage the volume of key issues and risks.

KEYWORDS: project governance, corporate governance, mega project,

INTRODUCTION

Project governance, once considered a one-dimensional and stable activity, is far more variable with multi-dimensional factors and dynamic changes that occur, and this has not been widely researched. Project failure, marked by the inability to deliver within time and cost constraints while also delivering the expected business benefits continues to result in questions over the high rates of failure (Breese et al., 2015). Many suggest one of the primary root causes of project failure is the systematic failure of organizational governance (Too & Weaver, 2014)

[1] Head of Asset Management, Metro Trains Melbourne (MTM), Melbourne, Australia;
PhD student, Department of Infrastructure Engineering, University of Melbourne, Australia, pelhamn@student.unimelb.edu.au ,
[2] Discipline Lead Civil Engineering, University of Melbourne, Australia, colinfd@unimelb.edu.au.

while others suggest that the lack of operationalization of governance is a major cause (Muller & Lecoeuvre, 2014) primarily due to there being a lack of project governance theories.

In the context of mega project failure, the sheer financial impact of the failure can have a much wider consequence than just the project. Due to the financial impacts alone, many countries have been required to implement governance controls to better understand and articulate project governance risk. Examples include Sarbanes-Oxley disclosure (USA) for internal project control risks (Dinsmore & Rocha, 2012) and governance guidance for Arm's Length Bodies (ALBs) in Northern Ireland (Ireland, 2007).

Disappointingly however, the literature continues to demonstrate that there are no commonly agreed definitions of project governance (Bekker, 2014), as well as a lack of research in to the impact governance has on a project. To address this gap, the approach used in this research was to identify a mega project that was successful, and to investigate in detail the project governance arrangements. To achieve required the identification of a successful mega project, and gaining access to a data source support a meaningful study. The Regional Rail Link Project (Australia), addressed the second criteria through being granted access to all the project board meetings as a data source.

Gaining access to a detailed source of data on one project, over its whole lifecycle, was a key consideration in order to provide a suitable case study to investigate. The aim of the case study was to sensibly investigate the core issues that the project governance body addressed, and this was achieved by analysing the content of the project board's minutes and its subcommittee. By using a qualitative approach, the board and subcommittee reports were analysed using content analysis techniques to making inferences about the board's functioning, by systematically and objectively identifying special characteristics of messages (Berg, 2001). This resulted in new insights being found.

This article is structured as follows:

- Section two introduces the methods used in the analysis
- Section three discusses the literature on megaprojects, describes typical governance arrangements for projects, and provides a background on the case study
- Section four is an in-depth analysis of the case study
- Section five presents key findings, and
- Section six concludes.

METHODS

The method used in this research was through using a case study. A case study *"allows investigators to focus on a 'case' and retain a holistic and real world perspective*" (Yin, 2014, p. 9). While a significant amount of research on the topic of 'project success and failure' has been undertaken, it has ultimately been retrospective. Gaining a detailed insight to the functioning of a mega project, it mechanics, and how it operates has been difficult. In many examples retrospective analysis focused on 'why projects fail' [see KPMG (2010), (Frese & Saunter, 2003; Williams & Samset, 2012)], normally accompanied by a number of suggestions and recommendations of what (future) projects change or improve to ensure their future projects are more of a success. One of the limitations in this approach is that there is a gap in any significant depth of research of the governance arrangements of mega projects, and raises the question around what are those project governance structures that are effective, and what did the project governance achieve?

A research method describes the technique and procedures used in the research. Neuman (2006) suggests that qualitative researchers tend to use a case orientated approach,

whereby the analysis occurs in messy settings *("many factors and events in one place and time")*. As a result, a detailed and rich insight in to a case is used to replace a quantitative research approach where precise and detailed analysis of measurements can be undertaken across a sample of units (Neuman, 2006). In this case, the research was undertaken within the bounds of social science, and the approach to the methods selection process utilised a social science framework by Crotty (1998). Crotty's position is that to develop a research proposal, significant effort is required to be put in to answering a number of questions in order to understand knowledge. Four questions are used within the framework that constitute the basis of the research methods process which also recognises that a bulk of discussion and terminologies on methods, in general, relate in one-way or another to the questions. Crotty's four elements question the method, methodology, theoretical perspective and the epistemology in order to shape research.

Methodology – a case study of the Project board and subcommittee documents

To refine the research, the case explores the functioning of a project governance organisation by analysing the detailed minutes of the project board, and its sub-committee in order to understand what issues the project board spent its time governing. To enable this research to be focused, a research question (RQ) was posed:

RQ - what were the core issues that the project governance body discussed to deliver a successful mega project?

Two perspectives and data sets were analysed to consider answer the RQ. The approach is visualised in Figure 1, which involved analysing the issues considered by the board (step 1) and the issues considered by the project board sub-committee (step 2). Each step was analysed separately.

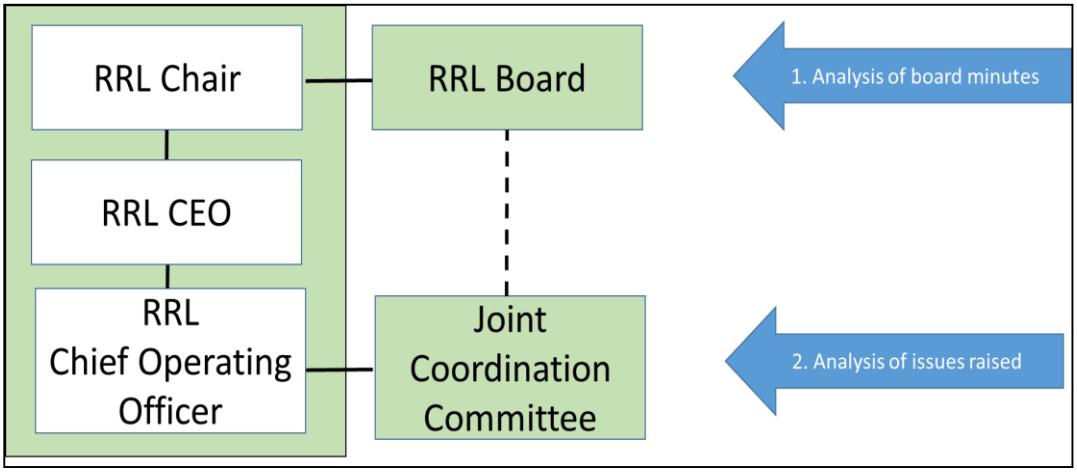


Figure 1 – governance arrangement and analysis steps of the project

LITERATURE REVIEW

Mega projects

While the term 'mega projects' is not new, it has seen a number of definitions applied to it. The term often uses project cost as the basis of a definition. Altshuler and Luberoff (2003)

trace the term 'mega project' back to late 1970s where the Canadian Government and Bechtel started to use the term. For both these organisations the term referred to a project's size and scale, in order to define the development projects they were delivering at the time. Altshuler and Luberoff further defined the term 'mega project' as a project costing greater than $US250m, but recognized that what made these projects so distinctive was their exceptionally large budgets, which require significant economic and political involvement (Lehtonen, 2014). Since 2002 though, the definition of a mega project is better represented as those infrastructure projects with multibillion dollar budgets, characterised by uncertainty, multiple network actors and political involvement (van Marrewijk et al., 2008). One commonality with mega project definitions, however, was the recognition that such projects had 'strikingly poor performance records in terms of economy, environment and public support' (Flyvbjerg, Bruzelius, & Rothengatter, 2013).

Regardless of size, projects typically classified as mega projects are usually found on such projects as roads, railways and major construction. The sheer size of the projects and their impact has attracted much attention in the media and literature, especially when they fail. Lehtonen (2014) suggests that much of that focus has been on the mega project 'pathologies', whereby the mega project is characterised by chronic cost overruns, time delays and not delivering the expected social and economic benefits. Miller and Hobbs (2005) argue there was little in the project governance literature that addresses the dynamic nature of governance structures of mega projects. Their position was that the literature suggests governance was primarily an oversight function; with that oversight function being quite stable despite changing activities and context within the project. From a project methodology point of view, such as that advocated by many project management methodologies, which also considers a project board as being static (such as PRINCE2), their position on mega project governance differs significantly. They suggest '*governance regimes that are themselves dynamic – that can change themselves to adapt to the emerging context*' (Miller & Hobbs, 2005). It was further suggest that when designing a project governance structure, there are three relevant literature streams that require consideration – corporate governance, institutional governance and project governance.

Within each of these streams, corporate and project governance is conceptualised as an oversight function, however, there is recognition that complex projects require governance structures that adapt to the context [of the project]. This project governance concept of adaptability is further reinforced by Too and Weaver (2014), who argue there must be a link between the outputs of a project and the business strategy, for projects to be able to deliver value. In a review of project governance structures of Australian projects, Wilson et al (2010) argued that the complexity of a project necessitates a variety of governance structures, ranging from corporate governance and reporting obligations, to internal governance accountability.

While the performance of corporate boards has received such attention, for example, the relationship between corporate governance and performance (Huang et al., 2011), corporate governance and price-to-book ratios (Newell & Wilson, 2002) and incentive pay for Directors (Gerety, Chun-Keung, & Robin, 2001), there is little that has applied such principles and considerations to the subject of project governance and the delivery of major projects.

Project Governance defined

At present there is no one universally accepted definition of project governance. This is highlighted by Too and Weaver who state that there are generally held misconceptions that governance is focussed on due process and control ((Too & Weaver, 2014). For the purposes of this paper the following definition is used:

"It comprises the value system, responsibilities, processes and policies that allow projects to achieve organizational objectives and foster implementation that is in the best interests of all the stakeholders, internal and external, and the corporation itself" (Muller, 2010)

Governance structures used for mega projects

At this point a useful question is, 'what are the typical governance structures used for governing mega projects?' As outlined previously, due to there being limited consensus on mega project governance, the same applies to the structures used. In order to compare the governance structure used on this case study, a sample of three commonly used project governance structures are presented in this section. The first (Fig 1), from Patel and Robinson describes a commonly used Public Private Partnership/Private Finance Initiative (PPP/PFI) delivery model for UK health projects. It uses a simple reporting structure, allowing for clear accountability and decision making (Patel & Robinson, 2010). This model focusses on the importance of the project governance to be shared between the senior user, (project) executive and a senior supplier. The second structure (Fig 2) from the Association of Project Management describes the relationship between corporate governance and project activities. The Venn diagram describes the relationship of board, major project stakeholders and alignment of projects as the key to structuring project governance (APM, 2004). The third structure (Fig 3) is a best practice project governance guide from the Department of Treasury and Finance (Victoria, Australia) that describes a Public Private Partnership project governance structure that focuses on the relationship between the department, steering committee and the relevant PPP authority. In this structure, the complexity of the governance relationships are shown relating to functional roles within the structure.

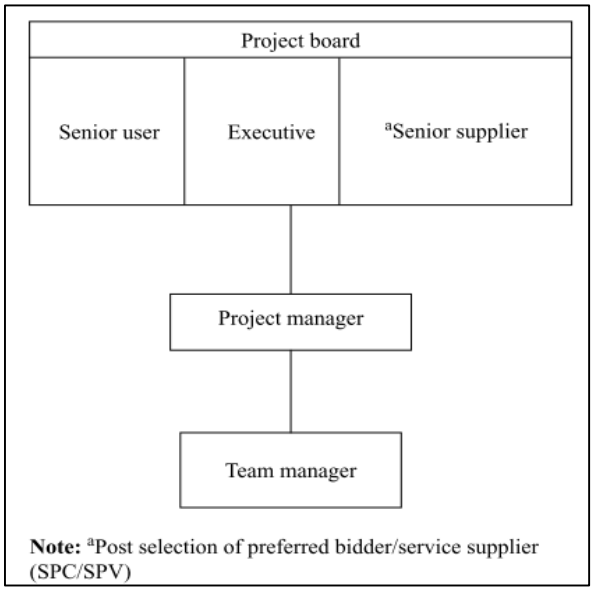


Figure 1 – typical project governance structure (Patel and Robinson, 2010)

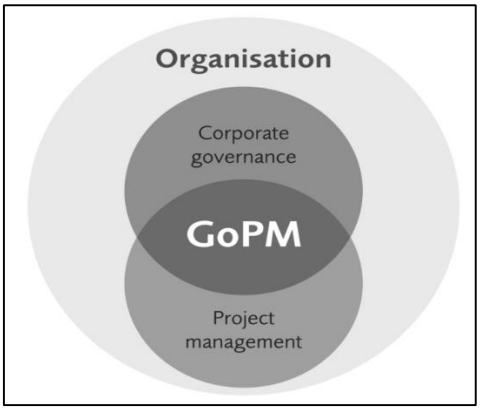


Figure 2 –the Governance of Project Management (APM, 2004)

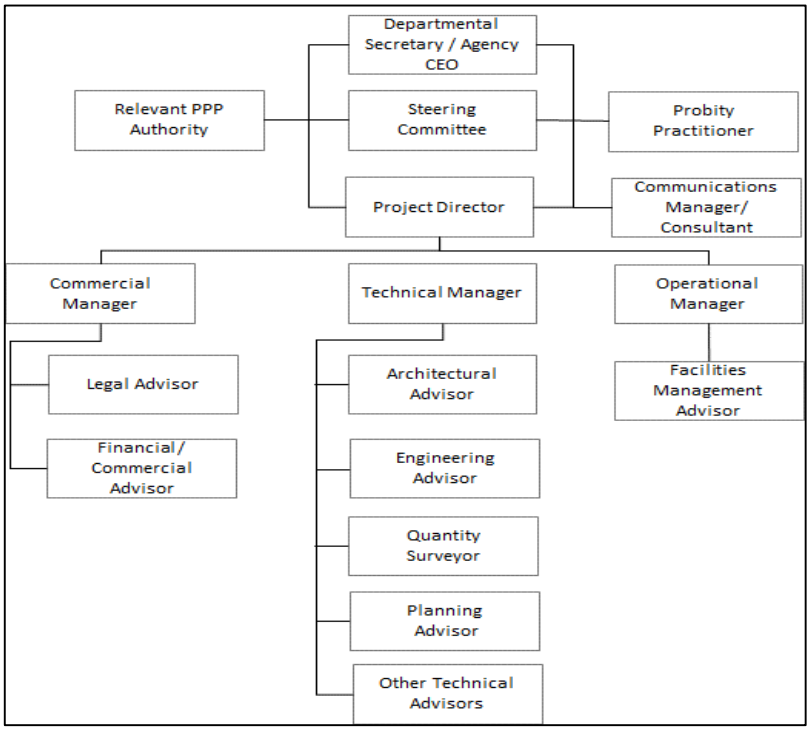


Figure 3 – typical PPP governance structure (DTF, 2012)

One view is that complex [mega] projects are being used for strategic transformations, yet they are being used in the context of uncertainty which makes governing the project difficult to deliver the objectives, which require skills in technical matters and turbulent operating environments (Pitsis et al., 2014). This may indicate that the outcome required could be more important than the project governance structure to deliver the project. This position is again reinforced by Too and Weaver (2014), who suggest that good governance is about achieving an optimal balance between four elements – portfolio management, project sponsorship, project management offices (PMOs); and Projects and programs. Regardless, the rise of the use of mega projects continues, as does the poor performance of their delivery.

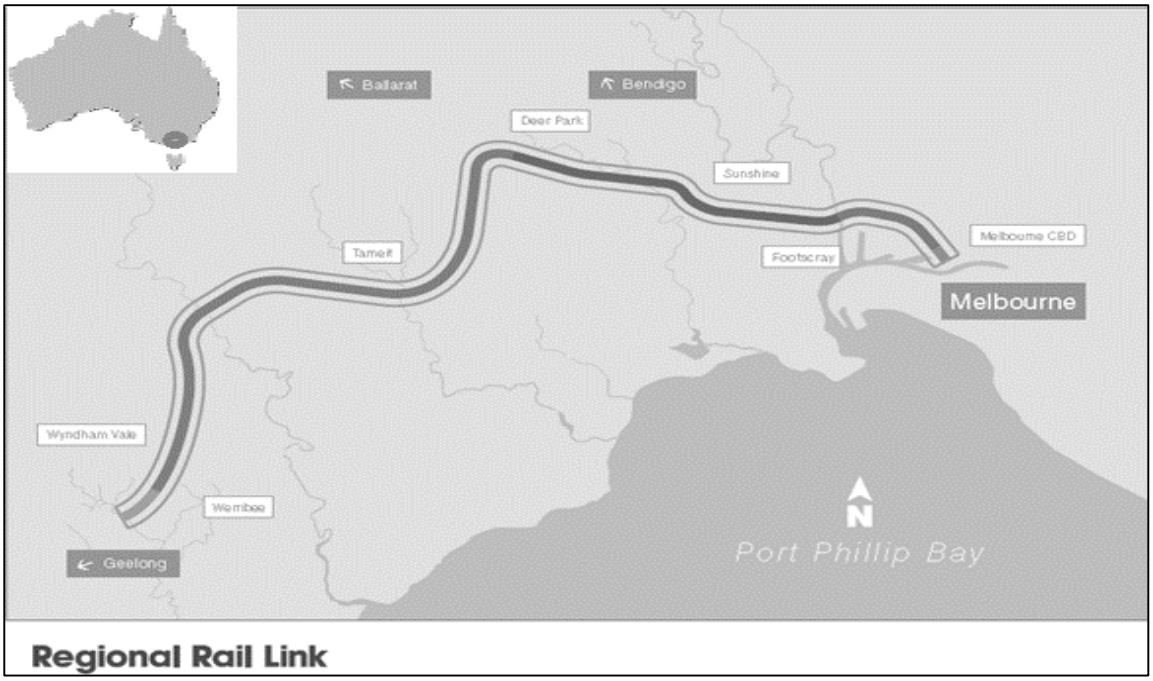
Of difference however, was the case study used in this research, which was a mega project one that was delivered under budget and on time, and provides some useful insights in to a successful project governance structure.

Case study background

The case used in this study was the Regional Rail Link (RRL) project in Victoria, Australia. The $AUD 4.1 billion project was initiated following a Victorian Government sponsored report by Sir Rod Eddington, '*Investing in Transport, the East West Link Needs Assessment'* (Eddington, 2008). The report made two recommendations for a Melbourne Metro [rail system] which included:

1. the construction of a 17km tunnel from the city's west to the south-eastern suburbs; and
2. a new rail connection (the Tarneit link) to improve regional rail service to the city.

The second recommendation was the catalyst of what became the Regional Rail Link project, and the subject of this research. The following map outlines the location of the alignment of the project in Melbourne, Australia. In total, over 90 kilometres of new rail track was laid, which connected the largest regional city of Victoria, Geelong to the city of Melbourne.



Map 1- route alignment of the RRL project (RRLA, 2014a)

Eddington identified, amongst other things, that the project would provide benefit by separating metropolitan and regional trains at the central train station and increase capacity for regional commuters. The cost of both these initiatives would be in the order of $AUD7.5-8.5 billion dollars (Eddington, 2008). In 2008, the Federal Government of Australia provided the State of Victoria with $AUD3.2 billion as a contribution to delivering the Regional Rail Link project, with the remainder of the costs to be funded by the State (Mees, 2010). By implementing the Eddington recommendations, the economic value of the investment was projected to be 1.2[3], meaning that investing in the project would have a positive economic impact on the State (Meyrick, 2008). The RRL project was delivered over a seven year period

[3] including wider economic benefits (WEB)

from 2008 to 2014. The project resulted in the installation of 90 kilometres of new rail, and the creation of the new rail corridor in Melbourne's western region. The project was delivered below its original budget and ahead of time. In 2014, indicating the success of the project, it was recognized as the Infrastructure Project of the Year, delivering '*a step change for commuters travelling on one of the state's busiest corridors*' (IPA, 2014).

The case is an example of a mega-project that was widely heralded as a success, and as such, reviewing the project governance arrangements provided valuable insights to the project governance function required for a mega-project to ensure project failure did not occur. While the governance structure of the RRL developed over time, during the procurement and construction phase (the primary focus of the case study) is outlined in Figure 4.

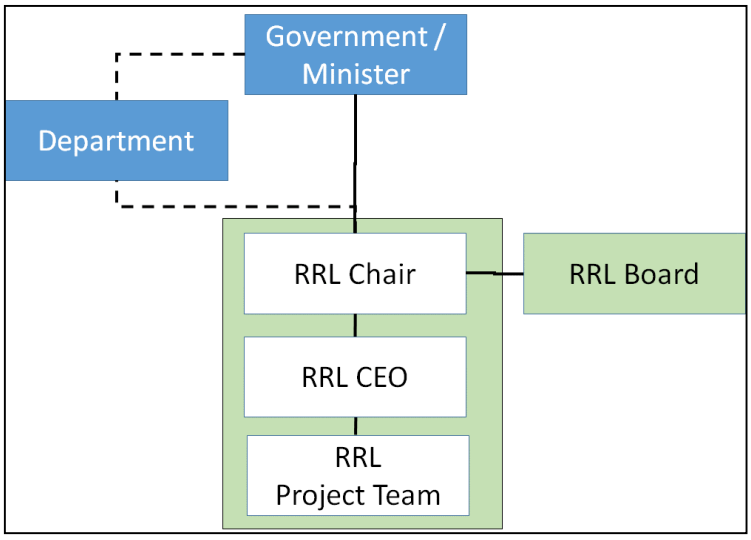


Figure 4 –project governance structure of the Regional Rail Link Authority

From the outset, the project was recognised as being a complex mega project (Garner, 2014). Delivered over a seven year period, the project involved multiple delivery agents, and over the project life, saw its project governance structure evolve. In order to drive successful outcomes throughout the various phases of the project, it was necessary to establish a governance structure capable of responding to the various challenges arising from the complex and fluid project environment. The early governance body identified that it would require a structure that allowed for efficient and timely decision-making, due to the demands of the project's ambitious program, and delivery requirements. To effectively govern the project, a strong focus was initially placed on setting up of the project governance structure, and the reporting requirements for the project board. The changing project governance arrangements for the project are summarized in Table 2, which describe the three distinct governance structures used by the project over its lifecycle. It is concluded that the RRL project qualifies for being defined as mega project on the basis of its cost, scale and complexity of stakeholder interfaces.

	Project governance transitions		
	Lead Department (Dept of Transport)	**Administrative Office (RRLA)**	**Statutory Authority (PTDA)**
	(Strategy/planning)	**(Project procurement / delivery)**	**(Operations)**
Year			
2008	X		
2009	X		
2010	X	X	
2011		X	
2012		X	
2013		X	
2014		X	X
2015			X

Table 2 – Project governance for the RRL project

IN DEPTH ANALYSIS

This section describes the two stages of analysis. The first step involved analysing the contents of the Board minutes while the second involved analysis of reports by the sub-committee, the Joint Coordination Committee (JCC).

Step 1 - Board Minutes analysis

The RRL Board held a total of 46 board meetings from the period 22 September 2010 to 27 May 2014. For each of the Board meetings there was an agenda and minutes. To analyse the board papers, all the board papers were converted to optical character recognition (OCR) .pdf format and loaded in to the software tool, QDA miner. QDA miner is a suite of tools that handle mixed model integration analysis. It combines WordStat – a quantitative text analysis package and SimStat, a statistical data analysis package in order to analyse data (Lewis & Maas, 2007). QDA miner can be used to manually and automatically code text and a user can code sections within documents using multiple codes as needed, which allows for detailed coding on specific issues (Bobier, 2006). A qualitative analysis approach was used to analyse the contents of the board papers, focussing on two primary coding elements of the minutes:

1. The *subject heading* of each Board agenda item. This involved reviewing the minutes and coding the minutes using the heading of each agenda item.; and
2. The *issues raised* within each *subject heading*. This involved coding the content of the minutes by each issue issues raised.

Coding by 'subject heading'

Each set of board minutes was reviewed and read in order to create an initial set of 'commonly occurring' agenda subject headings and issues raised. These codes were then pre-populated as the initial set of codes in the codebook, prior to the formal coding process occurring. A logic test was used to code the minutes - the heading, general issue discussed or content of each section (of the recorded minutes) was used as the primary 'subject' code. Generally this information was found in the heading of each section of the minutes, or contextualized by reviewing the summary text within that section of the minutes. As the minutes were recorded in a consistent format across the life of the project, the technique resulted allowed for a high level of consistency with the coding across all the 46 sets of minutes.

A detailed list of codes was created as the reviewer coded each section of the minutes. One of the benefits of QDA was that it allowed for new codes to be created at any time, and

for codes to be merged (such as 'time' and 'schedule') when code types were revealed to be similar, in the master code book. The first five sets of board minutes were initially coded, representing approximately a 10% sample of the total number of minutes analysed, and at this point the process for coding was reviewed. During this step, it was found that the coding process was resulting in a consistent coding technique, which was suitable for coding the remaining minutes, because the data set was following a standard reporting format.

Coding by 'issue discussed'

The minutes held a large quantity of, and disparate range of information that was raised, discussed and actioned within each section of the minutes. Continuing to use the coding methodology used for 'subject', and using the new knowledge from the first step, the coder compiled an initial list of commonly recurring 'issue discussed' which formed the basis of an 'issue discussed' codebook. As with the initial coding step, similar codes were able to be renamed, merged or deleted (where later found that the code was not used) in the QDA tool.

Coding methodology

The detailed coding methodology was planned using the following steps: read each set of minutes, then code each set of minutes one at a time. This approach was modified after the initial 10% review point. The change in coding methodology was improved to code across each 'section' of the remaining 41 sets of minutes, and resulted in a more consistent coding mechanism. As an example, 'Section 3' of the minutes generally had the heading 'Executive Update', 'Risk and Issues', with specific progress updates such as 'Project Progress'. This section appeared in the most of the minutes, and as such, coding of that specific section (across all sets of minutes) ensured the minutes were coded consistently. By coding each of the Section 3 elements of all the minutes, one-after-the-other, this ensured that any potential coding error (such as interpretive errors caused by using a wrong code) would be minimised, and ensured a high level of consistent coding across all the minutes.

The review, and change in the coding methodology resulted in a significant improvement by ensuring accurate coding capture occurred, allowing for each section to be coded in the same way across the entire data set. This resulted in the researcher not having to continually decide which of the 178 codes to use. To further reduce the risk of coding data accuracy, each section of the minutes was completed in one coding session. Figure 4 below is a screen shot of the QDA tool, with the output of the coding by subject on the right hand side.

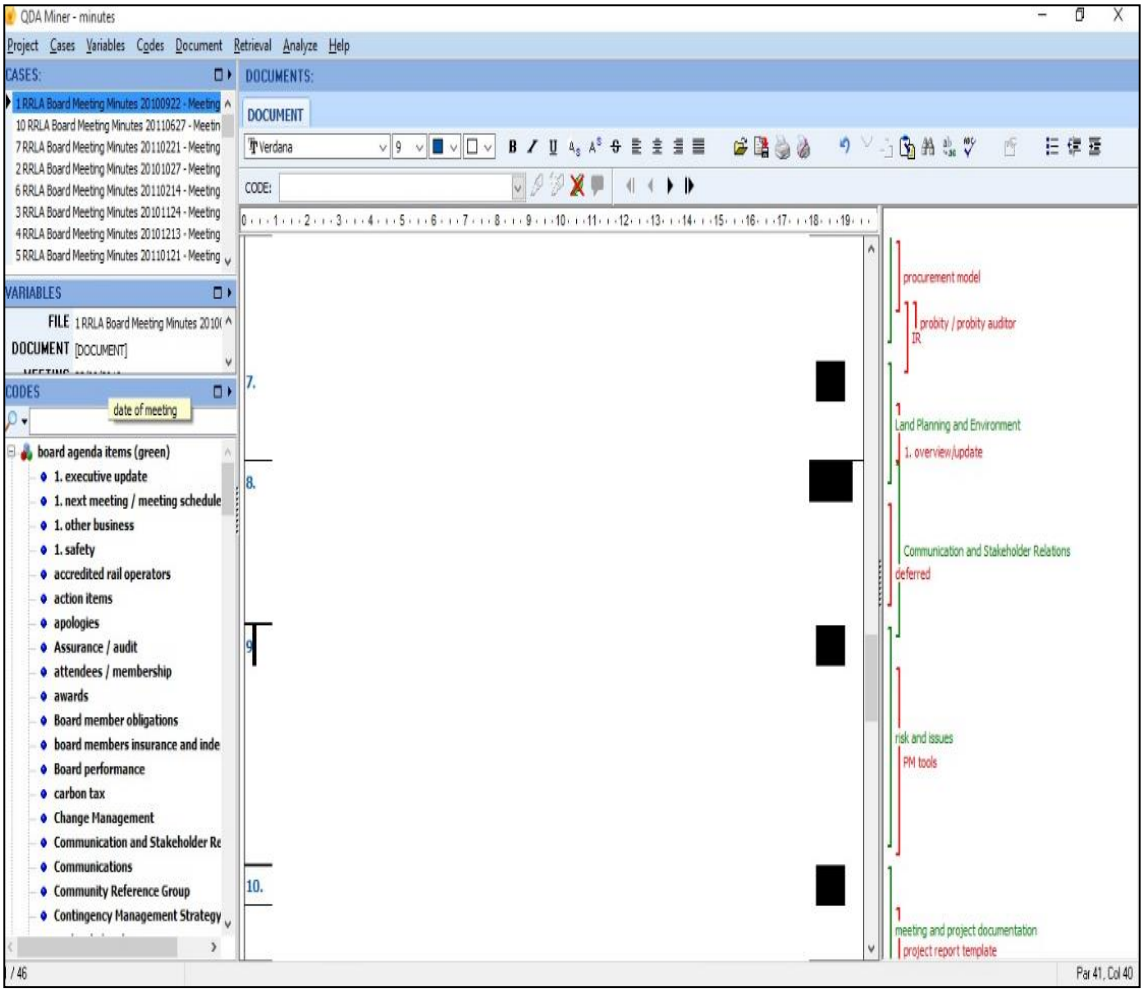


Figure 4 – screen shot of QDA software and coding

Step 2 – Subcommittee analysis

The second step was to review and analyse the subcommittee of the project board. The JCC was the primary sub-committee implemented by the project board, which functioned during the construction phase only. The JCC held a total of 31 meetings from the period February 2012 to October 2014, and for each of their meetings, there was an agenda and minutes prepared.

JCC overview

During the procurement phase, the RRL recognised the risk of having multiple procurement contracts and decided to implement, and trial, a 'shadow JCC', establishing the forums and structures that would eventually become the participants of the JCC and its subcommittees. The board wanted to avoid a perception that it was a bureaucracy and aspired to maintain a high degree of flexibility with regard to implementation and action and measure its own performance. To achieve project-wide performance, the JCC set challenges and established consistent project-wide communication to ensure all packages worked to the highest level and managed risk as an integrated team. The overall goal of the JCC was to behave more as a project-wide Board rather than a disputes committee. The JCC's aim was to creating high quality, project-wide performance to ensure the project delivered the specified functionality in accordance with the performance framework, rather than simply solving issues escalated by subcommittees (RRLA, 2014b).

Each of the six work package was required to appoint a JCC representative. Where a work package comprised of more than one party, the work package had to collectively appoint one single JCC representative, regardless of whether it was an alliance or unincorporated joint venture, with the following special conditions:

- For the alliance based work packages, the alliance was required to appoint a JCC representative who was from a non-owner participant who was responsible for carrying out construction works within the alliance.
- Rail operators were required to appoint a JCC representative to represent it in its capacity as a rail operator and, where applicable, a second representative to represent it in its capacity as a package contractor

In total, there were eight JCC subcommittees established – Safety, Construction; Engineering; Track Access and Occupation; Accreditation and Management of Change; Communications and Community Relations; Commissioning and Operational Readiness; and Land, Planning & Environment. The core document produced by the JCC was the 'JCC Project Summary' which provided an executive overview of the progress of the project. In particular, the Summary Page provided a detailed reporting on project progression through escalation of risk items using a 'key project items' reporting framework (see Fig 5 for an example of the summary page). For the period of the JCC, the committee provided monthly reporting on 25 key project items, and highlighted whether items were:

- On target;
- Of concern (highlighted as an amber traffic light); or
- Requiring action (highlighted as a red traffic light).

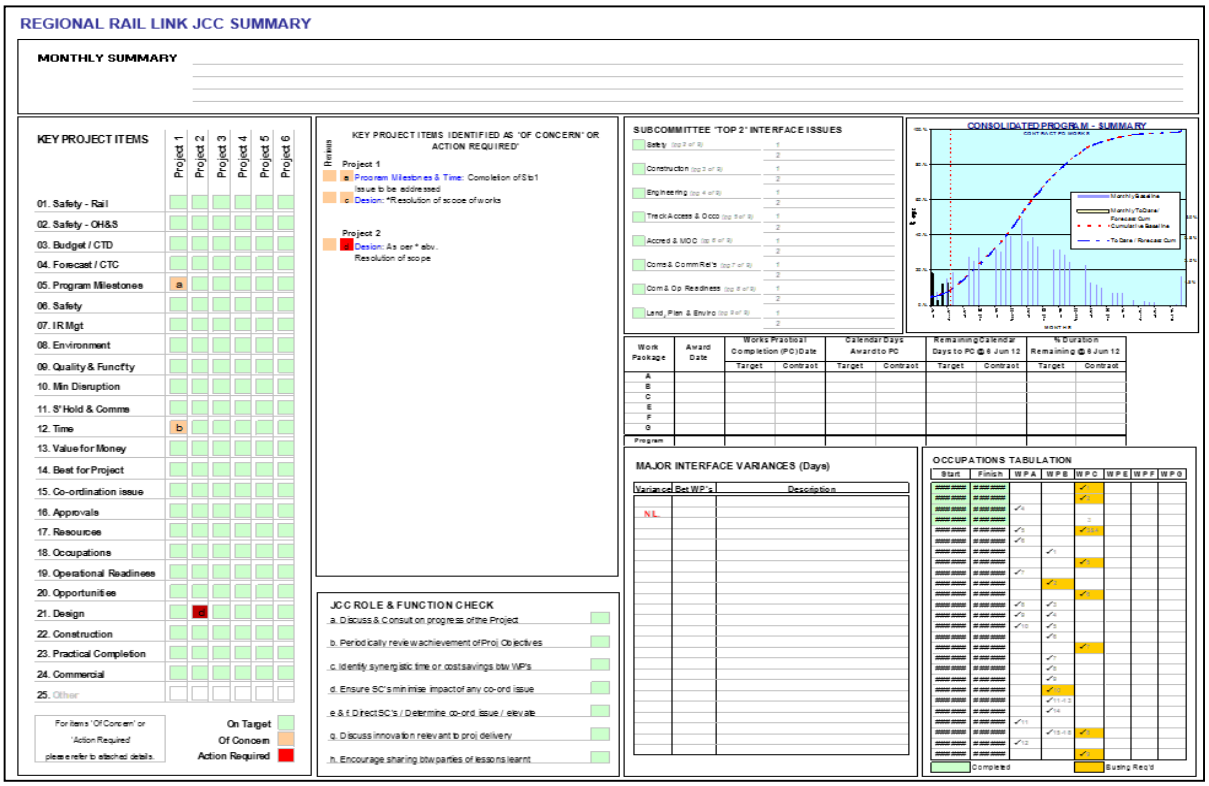


Figure 6– JCC summary page[4]

[4] Template only. Actual data has been modified

JCC coding - key project items

Unlike for the step 1 (project board coding), an alternative technique was used to code the JCC summary page. Each set of JCC minutes was reviewed, and the 'key project issues' section of the report was coded (the left hand column of Fig. 6). Each JCC report was converted in to an excel format, with each line item within the table coded as either being 'of concern' or 'requiring action'. Once the data was collated, a review of the codes revealed that two reporting categories changed during the duration of the project:

1. Reporting category 6 (Safety) - removed from meeting 17 onwards, and
2. Reporting category 25 (Document Management System book-in) was created from meeting 23 onwards.

The research did not investigate why these changes occurred. The changes were noted and the excel format modified to take in to account of the removal/inclusion of the codes.

Analysis of the Board and JCC

Board minutes

The codes were analysed using the QDA functionality analysis tool. The agenda issues were analysed using a cluster frequency technique to list and prioritise the number of occurrences of each. This provided a detailed insight in to which of the agenda items occurred most frequently, demonstrating which issues were considered most commonly by the project board. This step was an important in order to gain an understanding of the context and priorities that the project board placed on the board meetings. As the Board's lifecycle was over a four year period, this was relevant to gain an understanding of the decision making by the board. Table 3 summarises the number of unique codes created during the coding process for 'subject heading' and 'issue discussed'.

	Code type		
	'subject heading'	***'Issue discussed'***	***Total***
Number of unique codes	54	112	178

Table 3 – master code book summary

The results from the QDA tool were analysed in a tabular form, then manipulated and presented in different visualisation forms, including horizontal and vertical bar charts, word clusters, and pie charts. Within each form, a number of options such as frequency, number of occurrences, % of codes and % of cases were reviewed. After reviewing each format, due to the tool's limitations on viewing the data, the data was exported to an excel data format for further analysis and improved presentation.

As the research question focused on understanding the issues discussed at the project board, the data was most easily presented using a tornado plot. With complex data sets, the provision of easily understandable graphs can assist decision makers to understand complex data. In terms of sensitivity type analysis, there are two common graphical techniques that are used, spider-plots and tornado diagrams. Tornado diagrams are relatively simple, while according to some spider-plots are often drawn incorrectly by using the same arbitrary plus and minus limits (Eschenbach, 1992, 43). Recognising the importance of complex data being easily understood, the results of the board agenda items using the tornado plot technique are presented in Figure 7.

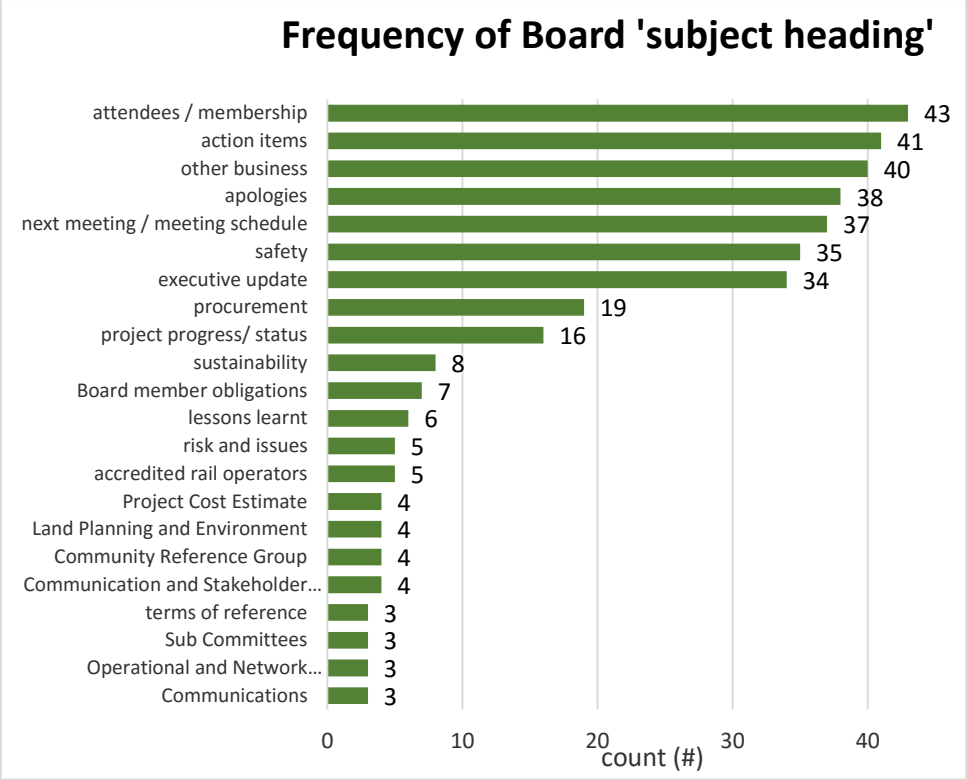


Figure 7 –occurrence of Board agenda subject heading over the project life

The tornado plot presents a number of relevant pieces of information. Firstly, the results show that there are seven frequency codes with an occurrence of greater than 30. There is a then a dramatic drop off of coding frequency count. While not presented, there were three codes that had a zero frequency count. This anomaly was investigated, and after reviewing the data set, it was concluded that the three codes were created in the early stages of developing the master codebook. During the coding process however the code became obsolete and was subsequently removed from the code book.

As for the analysis of board agenda by 'subject heading', the 'issue discussed' were analysed using the same technique. The 112 issues discussed headings were analysed using the cluster frequency function to list and prioritise the number of occurrences of the codes. Due to the large volume of issues coded, in order to present the results in a manner that was readable and visually useable, a number of codes were removed the graph in Figure 8. In total, there were an additional 39 codes that were coded less than four times and these codes were not shown in the table. A total of seven codes returned a zero coding count, and for the purposes of this analysis they were removed from the statistics and the QDA tool.

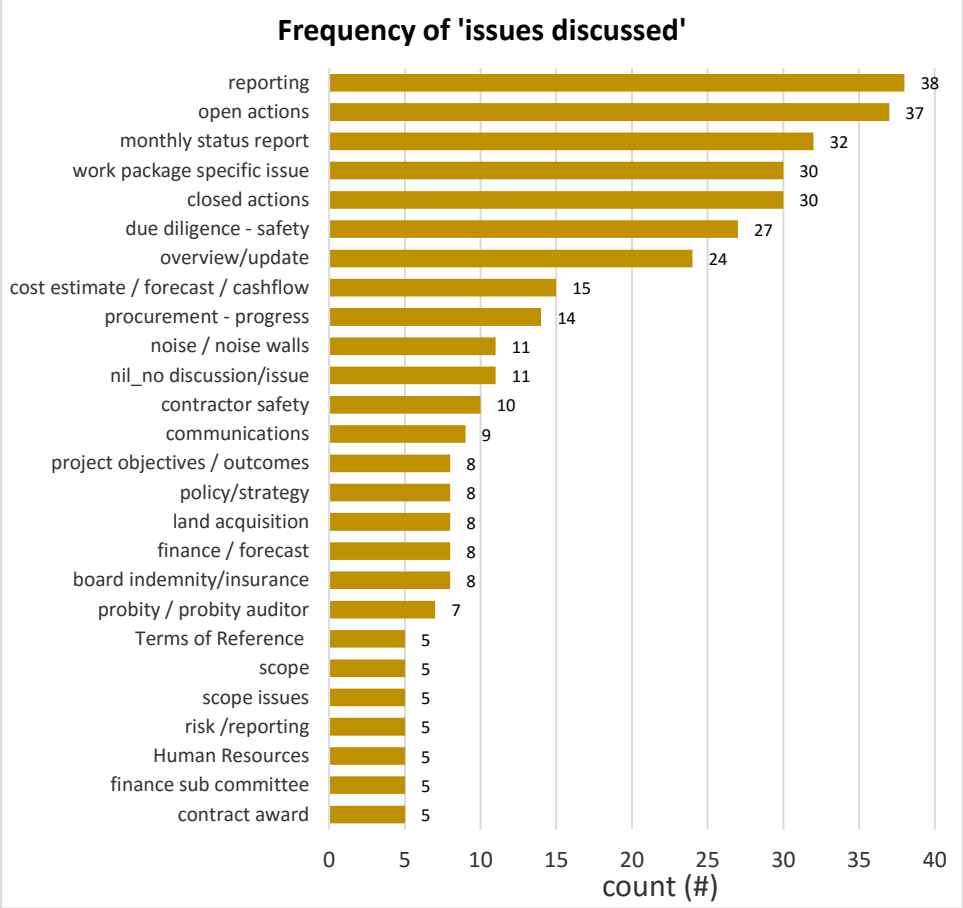


Figure 8 – occurrence of Board agenda issue discussed

Board sub-committee (JCC)

The results of the coding were analysed in excel and summarised as 'issues of concern' and 'requiring action'. This provided a detailed insight in to the areas of concern for each of the work packages, utilising a proactive approach to reporting of risk to the board. Table 4 summarises the count of issues escalated by volume.

	JCC code subject headings (count)	
	Of concern	Requiring action
Occurrence	265	99

Table 4 – total occurrence

Over the life of the construction phase, the JCC escalated a total of 364 issues, 37.3% of which required action to be taken either by the JCC or the Board. Figure 9 displays the volume of issues raised by reporting period (monthly) while Figure 10 displays the specific issues raised by issue over the life of the project.

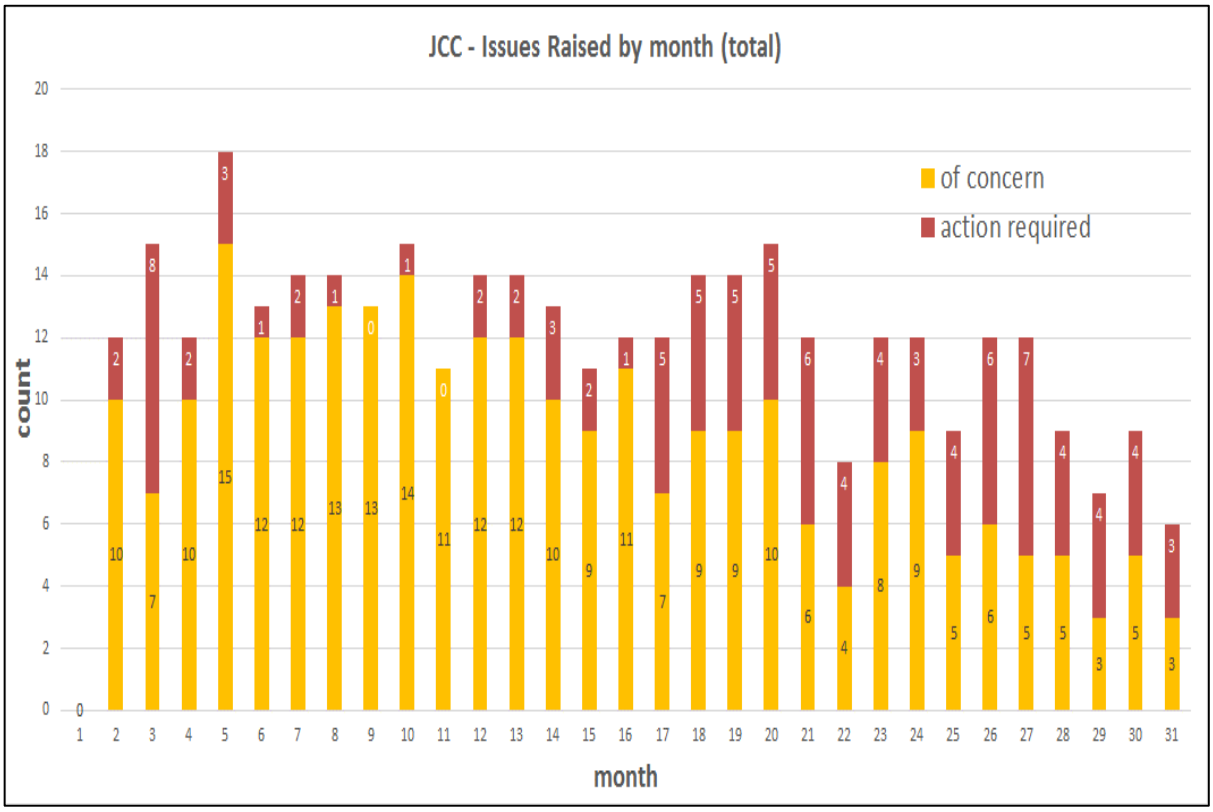


Figure 9– Summary of issues raised – JCC

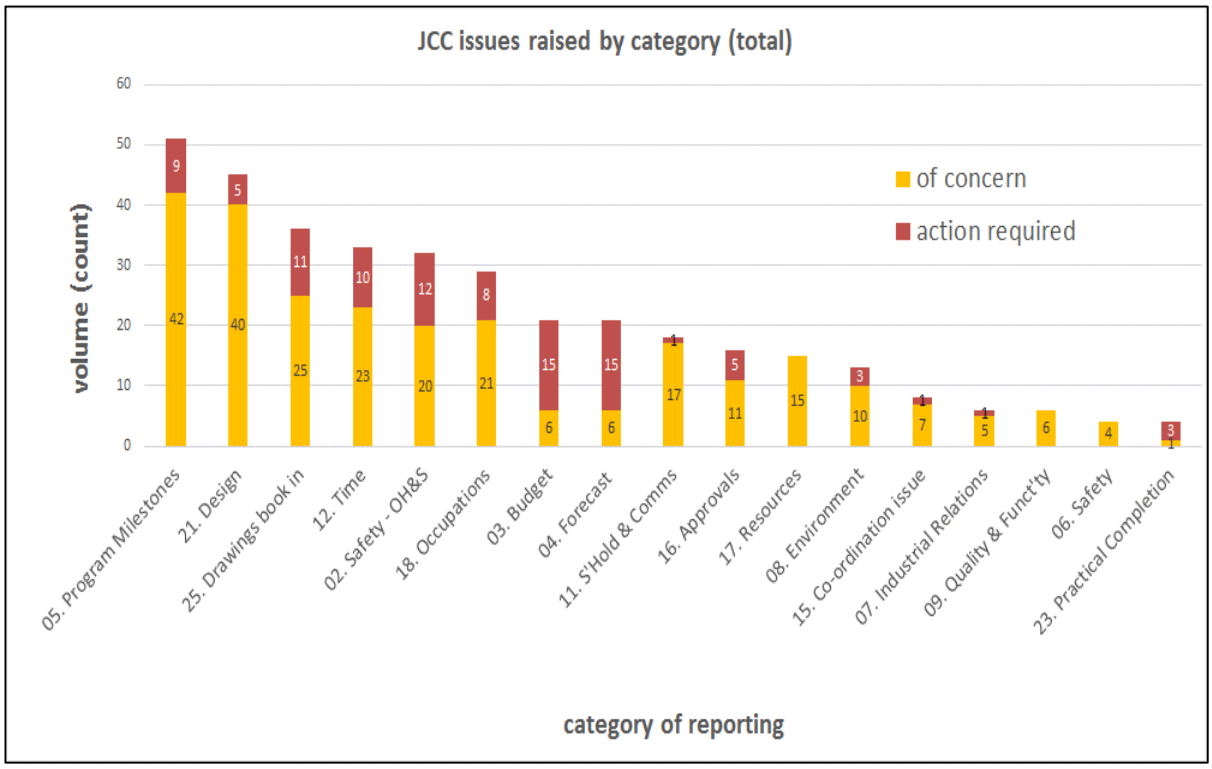


Figure 10– Summary of issues raised - JCC

The results from Fig 9 and 10 demonstrate that the project was consistently reporting risk to the project governance board on a regular basis and that there were a number of risks requiring mitigation. Initially (month 8), and then during months 17-21, there were higher than normal volumes of risks required action from the board. On more detailed analysis, it was revealed that the risks raised during months 17-21 continued to be raised on the same category/issue for a consecutive number of months on specific issues. Even though the mega project was a success, Figure 10 provides an insight in the high volume of risks that required active management by the sub committee and the board. This demonstrates that although risk was, by virtue of the success of the project, significant. Two risks in particular stand out, the first being the overall volume of risks 'of concern', which focus on the design and risks concerning budget and forecast. The first risk (design) demonstrates that for a mega project, there remains a high level of risk around the design throughout the life, and more prevalent, that issues around budgets required continual escalation to the board for resolution.

Decisions at the RRL Board

Carpenter (2008) suggests that (corporate governance) Boards spend up to four-fifths of their time dealing with the '*trivial many*', whereas if the Board focused on the vital few issues (20%), the board's value could create upwards of 60% greater value than their input. To gain further insight in to what the frequency of board agenda items indicates, a pareto analysis was used. When presenting only the top 20% of the overall issues (by volume), only two of the 54 issues by subject heading would be in the list ("attendee report" and "action item review"). The first of these is an administrative function, which does not necessarily provide any insight in to the decisions made by a board. It seems that the 20:80 rule in this case does not provide any detailed insight, therefore the 80:20 volume rule was applied instead. Viewing the top 80% of issues by volume quickly showed what the board's attention was focused on. The results do not necessarily directly translate in to a 'value add' activities of the board, as suggested by Carpenter, however it does provide insight in to those items by volume, that the board considered important.

A total of 11 out of the 54 codes account for 80% of the volume count within the agenda items by 'subject. The results did not initially provide any significant insight, as most project board minutes generally follow a standard format which do not vary much, as agenda items subject generally do not change. To provide more granularity of the top 80%, the 11 codes were further grouped in to themes using data reduction to create conceptual clusters. This resulted in four themes being identified and defined, and is described in the table below:

Conceptual Cluster / Themes	Description
1. Board administrative	Those items routine or administrative governance matters (recording attendance, apologies).
2. Project status	Those items relating to the reporting, status or progress of the project
3. Project outcome	Those strategic items that were considered to ensure the project delivers the expected outcomes/ benefits
4. Board obligations/governance	Those items specifically related to the board duties, roles and responsibilities of the board in executing their duties

Table 5 – codes grouped by theme

Using this grouping, the volume of decisions was able to be shown in percentages. In Table 6, the subject category items are not unexpected, however it does confirm that 18% of the board's effort was spent on outcomes and board obligations. The issue discussed indicates

that the board spend a majority of its effort on understanding the status of the project, and while code by administrative was high, the specifics of the issue discussed was only 13.5%.

	Code	
	Subject heading	***Issue discussed***
1. Board administrative	5 (46%)	5 (13.5%)
2. Project status	4 (36%)	23 (62%)
3. Project outcome	1 (9%)	4 (11%)
4. Board obligations/ governance	1 (9%)	5 (13.5%)
Total	**11**	**37**

Table 6– percentage breakdown of code by theme

KEY FINDINGS AND INSIGHTS

This research focused on a case study of a transport mega project, delivered over a period of seven years. For this project, the governance structures put in place shifted a number of times, reflecting the changing needs of the project. Project governance practitioners consider that implementing a project governance structure is one of the key project management activities. The literature currently does not extend past once a project board has been put in place, and providing insights in the what function the board then has, or when does the project board need to be put in place, remains unknown.

The RRL project commenced with the strategy and development phase being managed within a standard government departmental planning process, with a senior project steering committee governing the development. In 2010 the need (or risk) of the project shifted, which saw the creation of a standalone Administrative Office for the procurement and delivery phases of the project. When the project came to completion, the project governance was handed over to another body, the Public Transport Development Authority for on-going management.

In non-complex and smaller projects, governance arrangements can be administered using conventional project governance techniques, including procurement and scope management to transfer risk to parties most capable of managing the risk. It appears that mega projects do not operate in the same manner – regardless of the transfer of risk, the interfaces between parties is complex, and without oversight, namely mega project governing arrangements, the risk of project failure remains. The RRL project is an example where the project board did not transfer risks to be managed individually, but there was an acknowledgement that individual parties would struggle to resolve mitigating their risks without the cooperation of a number of parties, compared to using contractual arrangements for the risk mitigation.

The RRL project governance was novel on two structural issues. Firstly, the board was appointed as to act as an advisory board to the Head of the RRL Authority. Traditionally a project board would be accountable for the outcome, but in this instance the board was advisory. The second structural difference was the somewhat unique sub-committee structure, the JCC, which was granted delegation to resolve project risks before being escalated to the Board for resolution. This JCC structure, used over the 31 meetings during the construction phase, raised 364 issues that could have potentially seen the project fail, but the governance structure had allowed for the risks to be effectively managed in a unique way. Likewise, the project board spend more than 62% of its effort being briefed on, discussing and guiding the project on project status related issues. Many of the agenda type issues undertaken by the board focussed on board administration, which is not surprising as a board's role is to promote and facilitate critical conversations to achieve good governance outcomes.

There are a number of insights that have been revealed by using the qualitative approach to the analysis, and this has provided a depth of opportunity for further research and analysis on both these data sets and extending the findings to other projects. In particular, the board provided the project with an efficient means of reporting that enabled timelines of the project to be met, and provided a clear focus where the project had dependencies, risks and interfaces that required management. The creation of an Administrative office, which was sufficiently resourced throughout the life of the project, which had little turnover within the governing body appears to have provided government, and the project participants, reassurance that the board performed a strong oversight function and it necessitated robust and timely reporting of project performance, in particular, management of risk. Within the governance arrangements, the project ultimately was delivered under budget and ahead of time, and there was no need to resolve any formal disputes, and was even able to facilitate a strategy for staged deployment of scarce materials and specialist resources across work packages utilising the relationship contracting principle of best for project.

CONCLUSION

The paper focussed on a case. One of the challenges of understanding project governance decision making within a project is access to data. The analysis of this case focussed on those actions that were recorded in the minutes of the project board and its subcommittee. One of the major issues being researched on project failure/success is project governance, and this case was an example that was able to successfully implement a governance structure, that was both novel and successful.

The research question (RQ) allowed for focus on what the core issues that the board considered, and this was able to be answered by categorising and identifying that the board focussed on four broad conceptual clusters - Board Administration, Project Status, Project Outcomes, and Board Obligations/Governance. As well as the four clusters, the management of risks across the lifecycle is an important outcome that requires consistent attention for a mega project. In this case, this was achieved through a consistent reporting framework and pro-active risk, delivered through the use of a sub committee as a mechanism to identify and escalate risk (364 risks in total). Coupled with the approach to risk, there is a realisation that the governance structure was dynamic, which had three distinct changes of structure over its life. This may be an important realisation in project governance settings; that sensible project governance change may in itself be a key for ensuring the project is successful.

As with case studies, there remains a question of whether the learning from this case is representative of a wider spectrum of projects, or whether this case was unique. The study did not considered the influence, tone, priorities, personalities or expectations that the individual board members experienced. Such elements would provide a richer picture as to the issues the project board faced, as would interviewing the board members to get an insight in to their observations of why the project was a success, and their opinions on using novel governance structures on mega projects .

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