RISK CULTURE AND RISK MANAGEMENT

IN THE AUSTRALIAN PUBLIC SECTOR

April 2019

A thesis submitted for the degree of Doctor of Philosophy of The Australian National University

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Declaration of Originality

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material that to a substantial extent has been accepted for the award of any other degree or diploma at the Australian National University or any other educational institution, except where due acknowledgement is made in the thesis.

Signed: ______________________ On: _____/___/_____
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Abstract

This thesis examines how risk culture influences the use of risk management in decision-making in Australian public sector organisations. Specifically, it investigates whether organisational members’ beliefs and attitudes about risk management affect their use of risk management in decision-making, and how different internal organisational environments (hereafter referred to as risk cultural environments) and risk management mechanisms may influence organisational members’ beliefs and attitudes and the use of risk management for that purpose. The research objective was addressed by drawing on the organisational culture literature, which posits that organisational cultures may emerge from the basic underlying assumptions (BUAs) of members (i.e. a member’s beliefs and attitudes) and an organisation’s ‘artefacts’ (i.e. the visible objects, internal organisational environments and mechanisms in an organisation).

A two-stage mixed methods approach was used for this study. In Stage 1, four public sector organisations were analysed using interviews and document analysis, while Stage 2 involved the examination of three public sector organisation case studies.

The study found that the majority of executives and operators believed in the usefulness of risk management for compliance and assessment of downsides and that they used risk management for these purposes. However, there were conflicting or fragmented BUAs about the usefulness of risk management in strategic or operational decision-making, and risk management was used infrequently for this purpose. A strong controlling environment with a standard set of formal mechanisms resulted in risk management for compliance and assessing downsides and led to negative effects associated with generic or defensive risk management. Members, who thought risk management was useful for decision-making and used it for this purpose, were largely experiencing the positive effects of a collaborative risk cultural environment and informal
mechanisms, including sharing knowledge, openness, participation, customisation, which stimulate members’ thoughts.

The study also found the existence of interactions between different risk cultural environments and risk management mechanisms, which may have implications for the integration of risk management in decision-making by public sector organisations. Other positive influences on members’ BUAs and their use of risk management included the modelling of behaviours and BUAs by senior management, and the promotion of collaborative, innovative and goal-oriented risk cultural environments and informal risk mechanisms. Middle management was also important in facilitating communication and discussion about risk and increasing the relevance of risk management to members’ day-to-day jobs. The types and severity of risks were also found to have an influence on members’ BUAs and their use of risk management.
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<th>Definition</th>
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<tbody>
<tr>
<td>ANAO</td>
<td>Australian National Audit Office</td>
</tr>
<tr>
<td>BCP</td>
<td>Business continuity planning</td>
</tr>
<tr>
<td>BUA</td>
<td>Basic underlying assumptions</td>
</tr>
<tr>
<td>ERM</td>
<td>Enterprise risk management</td>
</tr>
<tr>
<td>HR</td>
<td>Human resources</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communications technology</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
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<tr>
<td>WHS</td>
<td>Work health and safety</td>
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Chapter 1: Introduction

1.1 Introduction

This thesis examines how risk culture influences the use of risk management in decision-making in the Australian public sector. Specifically, it investigates whether members’ beliefs and attitudes about risk management are related to their use of risk management in decision-making and how different internal organisational environments (hereafter, referred to as risk cultural environments) and risk management mechanisms may influence organisational members’ beliefs and attitudes and the use of risk management for that purpose. Drawing on common themes identified in the literature, a ‘risk culture’ is defined as the beliefs and attitudes of organisational members regarding risk and risk management (O’Donovan, 2011; The Institute of Internal Auditors, 2012; Department of Finance, 2014).

The following sections outline the background and research problem; justification and contribution of the research; analytical framework and research method; and the structure of the thesis.

1.2 Background and research problem

Background – risk management in the public sector

Risk management is attracting increased attention from government, regulators and managers (Douglas, 1992; Bhimani, 2009; Power, 2009; Lupton, 2013; Australian National Audit Office [ANAO], 2014b). Soin and Collier (2013) attribute this increased attention to the growing interest in corporate governance by governing bodies and the use of risk-based regulatory approaches aimed at managing risk by strengthening internal controls. ‘Risk management’ is defined as ‘coordinated activities to direct and control an organization with regard to risk’ (ISO
31000, 2018), implying governance and control. Much of the prior literature has focused on this theme.

Initially adopted by financial organisations, including banks and insurance companies, risk management is now used widely across a variety of organisations (Power, 2004; Huber and Scheytt, 2013). Both public and private organisations have adopted risk-based control approaches or are subject to risk-based regulations (Barrett, 2001a; Power, Scheytt, Soin and Sahlin, 2009; Soin and Collier, 2013). Additionally, stakeholders in corporate governance areas have embraced risk management as an essential component of organisational systems (Mikes and Kaplan, 2015). Standardised and formalised approaches, including enterprise risk management (ERM) and organisational-wide risk management approaches, which employs risk management standards such as ISO 31000:2009 and ISO 31000:2018 from the International Organization for Standardization (2009, 2018) and risk management frameworks such as that provided by the Committee of Sponsoring Organizations of the Treadway Commission (2004), have guided these efforts worldwide. This enthusiasm for risk management can also be found in the Australian public sector.

As far back as the 1980s, risk management has been discussed in the context of public sector reform initiatives (Barrett and Cronin, 1998). Initially, the focus of risk management in the public sector centred on accountability, conformity, security and equity (Barrett, 1996a, 1996b). However, during the 2000s, the public sector concurred with the private sector’s confidence in the effectiveness of ERM, which contends that an organisation can create value if it aligns its core components, such as strategy, processes, people, technology and knowledge, with risk management (McPhee, 2002; Barrett, 2003). Although they encouraged the implementation of ERM, public sector regulators called for a greater focus on performance than conformance (Barrett 2001b, 2003, 2014). In the late 2000s, the pursuit of innovation was emphasised alongside risk management (McPhee, 2005a, 2006; Matthews, Lewis and Cook, 2009). Given
that the outcomes of public sector policies and programs would affect a broader range of stakeholders, risk management in the public sector could be more complex than that in the private sector (McPhee and Richards, 2010).

**Criticism of the risk culture in the public sector**

In recent times, the failure to manage actual risks in the public sector has resulted in the misuse of government funds, lost opportunities and damage to accountability (ANAO, 2014a, 2014b). Examples of these failures in the Australian public sector can be found in health programs, contract management practices, administration of special funds and grants and social and environmental initiatives (McPhee and Richards, 2010; ANAO, 2014b). Consequently, it has been strongly recommended that public sector organisations take risk management seriously (ANAO, 2014b; Department of Education, Training and Employment, 2012; RiskCover, 2011).

To improve risk management, increasing attention has been directed towards the importance of the risk culture in developing and using risk management in decision-making in the public sector (Comcover, 2008; ANAO, 2014b; Department of Finance, 2014). Certain risk management practices in public sector organisations have been criticised on the basis that they result in nothing more than ‘box-ticking’ exercises, risk aversion behaviours or the transfer or avoidance of risk, rather than the actual management of risk (Hood, 2002; Power, 2007, 2009).

It has been widely acknowledged that a culture of risk aversion results in managerial ineffectiveness (Bozeman and Kingsley, 1998). In the Australian public sector, a culture of risk aversion and reputational risk management, without the actual management of risk, have been implicated as impediments to efficiency, performance and innovation (ANAO, 2009, 2014b; McPhee, 2006b).

In response to the criticisms of risk aversion, the Australian National Audit Office (ANAO) suggests that risk management should ‘become part of an organisation’s modus operandi—in
its corporate planning, reporting, decision-making and management practices’ (McPhee and Richards, 2011, p. 1). In addition, public sector regulators have called for the development of a risk management culture that enables the incorporation of risk management in organisational decision-making (Comcover, 2008; ANAO, 2014b). Given the importance of the risk culture in organisational decision-making, the Department of Finance (2014, p. 15) advocates for a positive risk culture to optimise decision-making, performance and innovation:

*A positive risk culture promotes an open and proactive approach to managing risk that considers both threat and opportunity. A positive risk culture is one where risk is appropriately identified, assessed, communicated and managed across all levels of the entity.*

ANAO (2014) also supports this view by recommending a risk management culture that enables members to engage with risks and embeds risk management into all governance and business practices. A positive risk culture is relevant to this thesis because risk management in decision-making requires members to consider both upside and downside risks in everyday tasks.

**Issues in cultivating risk culture for risk management in decision-making**

Despite these calls for a positive risk culture, a survey of the Commonwealth government’s risk management development program (Deloitte, 2018) found that many public sector organisations have difficulty cultivating their risk culture in a positive direction. The survey found that a positive risk culture was rated as one of the least developed areas in risk management and only 15% of organisations surveyed had met the targets for risk culture maturity. This suggests that deficiencies remain in the development of positive risk cultures that enhance the use of risk management in decision-making in public sector organisations. Hence, this thesis aims to gain a better understanding of risk culture as an important determinant of the use of risk management in the public sector (Power, Ashby and Palermo, 2013; ANAO, 2014b; Palermo, Power and Ashby, 2017).
To achieve this objective, this thesis aims to answer the following research question: *How does risk culture influence the use of risk management in decision-making in the public sector?*

This main research question is addressed through the following sub-research questions:

1. Are organisational members’ beliefs and attitudes regarding the usefulness of risk management related to their use of risk management for decision making in the public sector?

2. How do risk cultural environments and risk management mechanisms influence members’ beliefs and attitudes and the use of risk management for decision making in public sector organisations?

To investigate the research questions, this thesis compares the use of risk management in decision-making with other purposes by members in public sector organisations.

### 1.3 Justification and contribution

This study is motivated by the following reasons: First, historical research on risk culture and everyday risk management practices in organisations has largely focused on the formal artefacts of risk management, such as risk management frameworks, risk maps, risk matrices, risk appetite statements and risk reporting (Millo and MacKenzie, 2009; Skaerbaek and Vinnari, 2010; Jordan, Jørgensen and Mitterhofer, 2013; Caldarelli, Fiondella, Maffei and Zagaria, 2016; Arena, Arnaboldi and Palermo, 2017; Jordan, Mitterhofer and Jørgensen, 2018). However, there has been little research on how informal artefacts such as risk cultural environments and informal mechanisms influence members’ beliefs and attitudes associated with risk management, despite the fact that studies have argued that the characteristics of risk cultural environments and informal mechanisms, such as interaction and flexibility, can change how organisational members manage risk (Tekathen and Dechow, 2013; Arena, Arnaboldi and Palermo, 2017). Therefore, this thesis aims to expand on the existing research on everyday risk
management by exploring how risk cultural environments and both formal and informal mechanisms influence members’ beliefs and attitudes as well as their use of risk management. In particular, insight into the characteristics of risk cultural environments and informal mechanisms may shed light on how public sector organisations can facilitate the development of positive risk cultures.

Second, risk management research has largely focused on actors with organisational power, such as risk managers, and how they have led the development and implementation of risk management (Mikes, 2008; Power, Ashby and Palermo, 2013; Hall, Mikes and Millo, 2015; Kaplan and Mikes, 2016). Previous research has also focused solely on how risk management has been used in the upper levels of management in organisations (Huber and Scheytt, 2013; Palermo et al., 2017). This thesis aims to expand on this literature by exploring risk cultures across various levels and functions within organisations. Given that risk cultures encompass actors who are ‘less powerful and marginalised’ (Martin 2001, p. 10), as well as those who have the power to develop and implement risk management in organisations, it is important to include organisational members from a broad range of levels and functions. Therefore, in addition to executives and senior management, this thesis also focuses on the operational members of organisations, who may or may not share the views of senior managers and risk experts.

Third, this thesis seeks to explore the link between risk management, risk culture and decision-making. Prior research has primarily examined risk management in the contexts of compliance, governance, accountability, legitimisation and building confidence (Power, 2004; Power et al., 2009; Jordan et al., 2013). However, risk management in the context of organisational decision-making has been ‘understudied’ (Hall, Mikes and Millo, 2015, p. 4), and this thesis aims to address this gap in the literature. By providing a holistic picture on different organisational members’ thoughts, their use of risk management in different ways, and how this contributes
to their strategic or everyday decision-making, the findings may have implications for governments that have an interest in incorporating risk management in day-to-day decision-making.

Fourth, this study addresses the challenges arising from risk management used for decision-making in the public sector. As Barrett and Cronin (1998) suggest, public sector organisations are under pressure from multiple stakeholders. Unlike private sector organisations, those in the public sector have additional layers of accountability, which creates a range of challenges in meeting various expectations. For example, performance in the public sector is judged not only on financial outcomes, but also on non-financial outcomes. This could create a broader spectrum of risks, suggesting that there should be a greater focus on developing risk management strategies. Hence, this thesis explores risk culture and everyday risk management in the public sector, which is potentially more complex than that of the private sector because of the expectations of multiple stakeholders and additional accountability requirements.

1.4 Analytical framework and research method

In examining risk culture, this thesis draws on the organisational culture literature and applies organisational cultural concepts to the analysis of risk culture. An analytical framework that incorporates organisational cultural concepts has been adopted to help shed light on contemporary risk management practices (Protiviti and Institute of International, 2012; Power et al., 2013). In addition, existing theories in the organisational culture field may help to inform the so-called ‘terra incognita’ (Martin, 2001, p. 85) aspect of current risk management phenomena.

To provide an overview of how the research question has been addressed within the analytical framework, this thesis draws on three organisational culture studies: first, Schein’s (2010)
organisational cultural theory; second, Martin’s (2001) three perspectives of organisational culture, integration, differentiation and fragmentation; and third, Cameron and Quinn’s (2011) cultural typology, consisting of collaborative, create, compete and control cultures. This thesis also draws on prior literature to examine the role of formal and informal risk management mechanisms.

Schein (2010) analyses organisational culture from three perspectives: 1) basic underlying assumptions (BUAs), which are the deeply embedded beliefs and attitudes of organisational members; 2) espoused beliefs and values, which represent an organisation’s public and observable beliefs and value statements; and 3) artefacts, which are the tangible objects, products and processes in organisations. To facilitate a deeper understanding of an organisation’s culture, it is important to focus on organisational members’ BUAs, which are the deeply embedded beliefs and attitudes that may influence and help to explain members’ behaviours. Hence, to examine the risk cultures of organisations, this thesis focuses on organisational members’ BUAs as well as two artefacts—risk cultural environments and risk management mechanisms.

To further understand the dynamics of BUAs and to complement Schein’s (2010) model, this thesis also adopts Martin’s (2001) framework, which identifies three theoretical perspectives—integration, differentiation and fragmentation—that represent cultural consensus, conflict and fragmentation, respectively, among organisational members. The integration perspective, which reflects consensus of BUAs, focuses on the dominant manifestations of ‘a culture that have mutually consistent interpretations’ (Martin, 2001, p. 91). The differentiation perspective, which represents conflicts between BUAs, describes the inconsistency in cultural manifestations (Martin, 2001). The fragmentation perspective, which represents fragmentation and ambiguity of BUAs, describes cultural manifestations that are ‘neither clearly consistent nor clearly inconsistent’ (Martin, 2001, p. 94). The use of this framework may facilitate the
analysis of whether consensus, conflict or fragmentation of members’ BUAs influence the way members use risk management.

Schein (2010) suggests that an organisation’s artefacts may also be used to analyse its culture. This thesis examines two artefacts of risk culture—risk cultural environments and risk management mechanisms—and explores the influence of these artefacts on organisational members’ BUAs and their use of risk management in decision-making. To frame the concept of the risk cultural environment, this thesis draws on Cameron and Quinn’s (2011) cultural typology, which categorises organisational culture into four types of environment: collaborative, create, control and compete. This framework was originally developed to analyse organisational culture in the private sector; however, for the purposes of this thesis, it has been adapted to the Australian public sector with consideration of characteristics specific to public sector risk management environments. Hence, these four cultural environments have been renamed as follows: collaborative risk cultural environments, innovative risk cultural environments, controlling risk cultural environments and goal-oriented risk cultural environments. The characteristics of each environment help explain the influence of risk cultural environments on organisational members’ BUAs and use of risk management.

Finally, this thesis examines formal and informal risk management mechanisms. While prior research has focused primarily on formal risk mechanisms and provided evidence on how these mechanisms affect the characteristics of risk management (Farrell and Hoon, 2009; Jordan et al., 2013; Bank Governance Leadership, Tapestry Networks and EY, 2014), this thesis focuses on both formal and informal mechanisms and their effects on organisational members’ BUAs and use of risk management.

To address the research question, the study presented in this thesis used a two-stage approach. In Stage 1, interviews and document analysis were conducted to refine the cultural analytical
framework. The findings from Stage 1 then provided input into the development of the questionnaire and interview questions for Stage 2.

Stage 2 used a mixed methods approach to examine case studies of three organisations. Data collection methods included a questionnaire survey, interviews and document analysis for each case and participants from a broad range of levels and functions in each case were included.

Overall, the study examined whether organisational members’ BUAs were related to their use of risk management in decision-making, how different risk cultural environments and risk management mechanisms shaped members’ BUAs, and the influence of the two artefacts on the use of risk management in decision-making. Data from the questionnaire survey were used to analyse the relationship between members’ BUAs and their use of risk management in decision-making, and the overall effect of the risk cultural environment and risk mechanisms on members’ BUAs and use of risk management. Interview data were used to provide a more in-depth analysis of how the two artefacts influenced members’ BUAs about the usefulness of risk management in decision-making and the way they used risk management.

1.5 Thesis outline

The remainder of this thesis is arranged as follows: Chapter 2 reviews the literature on risk management for different purposes and the factors affecting risk management, including the value of risk culture in the public sector risk management setting.

Chapter 3 draws on the organisational culture literature to explain the study’s analytical framework, which covers four areas: 1) the concept of risk culture, 2) members’ beliefs and attitudes, 3) risk cultural environments and 4) risk management mechanisms.
Chapter 4 describes the two-stage research methodology adopted for this study and provides a rationale for the methodological approach used to examine the research question. It also describes the sampling, data collection and data analysis methods used.

Chapter 5 provides an analysis of the results from the Stage 1 interviews and discusses how they provided input into the design of the questionnaire and the development of interview questions for the Stage 2 case studies.

Chapters 6, 7 and 8 present the findings from Stage 2, discussing the risk cultures and risk management practices of each of the three case studies in the context of the analytical framework.

Chapter 9 provides an overall comparison of the findings from each of the three case study organisations. This chapter addresses the research question by providing an overview of the similarities and differences found between the organisations and discusses how members’ beliefs and attitudes may relate to the use of risk management for particular purposes. The chapter then discusses how different risk cultural environments and risk management mechanisms influenced organisational members’ beliefs and attitudes and their use of risk management in decision-making compared with that for compliance purposes. Tensions arising from the conflicts between different risk cultural environments and risk management mechanisms are also highlighted. The findings suggest that risk culture affects the use of risk management in decision-making, depending on whether the beliefs and attitudes of members are integrated, differentiated or fragmented, and that beliefs and attitudes are shaped by the prevailing risk cultural environment and the risk mechanisms used.

Chapter 10 outlines the major implications of the findings for research and practice, discusses the limitations of the study, and highlights opportunities for future research.
Chapter 2: Risk management and risk culture

2.1 Introduction

This chapter discusses the evolution of risk management practices in both the private and public sectors and examines how risk culture may shape the use of risk management in decision-making in Australian public sector organisations.

The first section discusses ERM and its associated issues in both the private and public sectors and provides a review of the risk management research, with a focus on risk management in decision-making. The second section reviews the literature on a range of factors shaping risk management practices and the literature on the influence of organisational risk culture on risk management in decision-making.

2.2 Enterprise risk management

The rise of risks and risk management were attributable to the social and environmental changes due to modernisation (Beck, 1992). Modernisation caused society to manage hazards and insecurities, such as pollution, and newly discovered illnesses. As a result, risks became more articulated and socially constructed (Beck, 1992; Lupton, 1999). In turn, the public became more aware that there were risks which need to be managed (Kasperson et al., 1988).

Risk management has, therefore, gained increasing attention over the past several decades (Beck, 1992; Huber and Scheytt, 2013; Soin and Collier, 2013). Corresponding to this interest, the demand for risk management in the private sector has grown—stakeholders, including regulators, consultants, academics, board members and managers, ‘intentionally collaborate to institutionalise risk management as “good” practice’ (Huber and Scheytt, 2013, p. 90). In response to this aspirational goal, ERM has been increasingly recognised as a systematic,
holistic and integrated approach to managing the risks that organisations face (COSO, 2004; Huber and Scheytt, 2013; ISO 31000, 2009, 2018; Jordan et al., 2018).

Following the example set by the private sector, risk management in the public sector has been formalised in recent decades because of the level of perceived risks that public sector organisations are willing to accept and the potential implications of risk management in achieving the strategic goals of government (Drennan and McConnell, 2007). Compared with the private sector, which places a greater focus on financial risk, public sector organisations are exposed to a broader range of risks, including those that may affect the outcome of policies and programs and those associated with transparency and accountability. Therefore, risk management is perceived as a means of achieving organisational objectives (Drennan and McConnell, 2007) and is used as an accountability and governance tool that can facilitate exchange and communication between internal and external stakeholders (Palermo, 2014).

Since the late 1990s, public sector organisations have adopted risk management practices, including ERM, that were originally driven by the private sector (Hood and Miller 2009; Power 2004). Originally developed from the Australian and New Zealand Standard 4360 (AS/NZS 4360) and progressed to the International Organization for Standardization 31000 (ISO 31000), risk is defined as “the effect of uncertainty on objectives” by the Australian public sector regulators. Risk can be expressed as the consequence of the effect and the likelihood of its occurrence, unlike uncertainty where it is expected to be unpredictable and uncontrollable. Greater emphasis has been placed on managing a positive and/or negative deviation from the expected events (Commonwealth Risk Management Policy, 2014). Although public sector regulators in Australia promoted risk management as early as the 1980s, increased enthusiasm in the Australian public sector towards the use of ERM occurred in the 2000s (McPhee, 2002; Barrett, 2003). The ERM approach addresses the belief that an organisation creates value if it aligns its risk management purposes with its core components, including strategy, processes,
people, technology and knowledge. An integrated ERM across an organisation is thought to be beneficial in discouraging fragmentation of risk management practices (Barrett, 2003). Following the introduction of the enterprise-wide risk management approach in the private sector, public sector regulators began to promote the same approach as a superior risk management tool. Since then, calls for the value-adding of risk management have been heard (Barrett, 2003) and there has been a greater focus on performance over conformance and on ‘risk optimisation’ over ‘risk minimisation’ (Barrett, 2001a).

Although the aspirational beliefs and values of ERM have been promoted and accepted by practitioners, the academic research has found risk management to be largely reactive and, therefore, ineffective (Mikes, 2009; Millo and MacKenzie, 2009; Huber and Scheytt, 2013). Criticisms of ERM include its standardised, short-sighted approach (Power, 2009; Huber and Scheytt, 2013), its aspirational instead of its actual management of risk responsibility and accountability (Tekathen and Dechow, 2013) and its calculative and measurement-oriented focus (Power, 2004; Mikes, 2009). Sceptics of risk management argue that ERM has created the delusion that organisations can manage even those things that cannot be managed, which Power (2004) refers to as ‘the risk management of everything’, and that risk management involves nothing more than documentation and auditing, resulting in ‘the risk management of nothing’ (Power, 2009).

Public sector ERM, which was implemented alongside the new public management programs that incorporated private sector logic and mechanisms, has been considered a generic form of risk management (Hood and Miller, 2009; Palermo, 2014). Research has found that generic risk management practices are problematic in the public sector because of the complexity inherent in delivering public services, which may not be effectively addressed by such practices (Palermo, 2014). Although many of the risks faced by public sector organisations are similar to those of the private sector, the public sector has some fundamental differences, including a more
diverse range of stakeholders to whom it is accountable and the social and political implications of its decisions (Drennan and McConnell, 2007). The public sector is associated with an increased level of public scrutiny, as well as demands for accountability and transparency. Therefore, public sector organisations must consider a broad range of direct and indirect stakeholders when managing risks.

In the Australian public sector context, international risk management frameworks, such as COSO (2004) and AS/NZS 4360 (subsequently replaced by ISO 31000:2009 and ISO 31000:2018), have guided effort of shaping risk management practices for public sector organisations. Since the 1990s, national-wide effort to lead risk management can be found (e.g. Managing Risk - Guidelines for Managing Risk in the Australian Public Service by AGPS, 1995) and more recently the Commonwealth Risk Management Policy developed by the Department of Finance in 2014 intends to provide principle-based risk management guidance to government agencies. COSO’s (2004) Enterprise Risk Management Integrated Framework provided discussions on common terms and processes of managing risk as a coordinated and structured organisational effort across the public sector. The Commonwealth Risk Management Policy (2014), rooted on ISO 31000:2009, more focuses on providing principles and guidance on shaping policy, framework, and soft elements such as culture and communication. The principle-based risk management guidance was developed in response to criticisms of the excessive focus on formal risk management that public sector entities were obliged to comply with, resulting in conformance, governance and a ‘box-ticking’ mentality (Barrett, 2003). There were calls to promote the usefulness of risk management in public sector organisations. Regulators warned public sector organisations to avoid making risk management a compliance-driven exercise (McPhee, 2006), advising them to balance conformance with performance (Barrett, 2002).
Another criticism of ERM is related to its defensive or secondary risk management associated with the ‘blame environment’. Defensive or secondary risk management can result in diluted responsibility and accountability because of its tendency to transfer blame to others (Hood, 2002; Power, 2009). Risk management has been perceived as a way of managing legitimacy and reputation and has been used as a defensive mechanism (Power, 2004, 2007). Researchers have argued that the standardisation of risk management has been adopted primarily to avoid the blame mentality, rather than to promote the actual management of risks. For example, Hood (2002, p. 34) points out that implementing rules of conduct for defensive risk management practices ‘may produce ill-considered and inflexible responses to complex problems.’ Defensive risk management also limits opportunities for organisations to identify hidden risks that could have serious adverse consequences (Huber and Scheytt, 2013).

In summary, ERM practices in the public sector tend to emphasise formalisation, documentation and auditing of risk, instead of focusing on the actual management of risks (Power, 2004; 2009). Hood and Miller (2009, p. 3) agree that public services are exposed to greater political risks, giving them ‘strong incentives to use risk management frameworks for symbolic assurance or blame-avoidance rather than ‘real’ risk management’.

During the 2000s, awareness of the Australian public sector’s focus on ‘forms’ rather than ‘substance’ slowly increased, and public sector organisations were encouraged to proactively adopt preventative measures for eliminating or reducing reputational risk. In addition, they were motivated to ensure that their reputational risks were ‘totally integrated with the operational risk processes’ (McPhee, 2005a, p. 11).
2.3 Risk management in decision-making

Although many authors have been critical of generic and defensive risk management practices across various sectors, some have taken a neutral or a positive stance in relation to risk management. While acknowledging the downsides of risk management, these authors have also explored everyday risk management practices in developing and communicating the concept and scope of risks, formal risk management mechanisms, organisational members’ beliefs and values about risk management and the role of risk experts (Arena, Arnaboldi and Azzone, 2010; Mikes, 2011; Jordan et al., 2013; Hall et al., 2015; Demortain, 2016; Zhivitskaya and Power, 2016; Palermo et al., 2017; Jordan et al., 2018). A number of studies have examined risk management in daily decision-making in the private sector (Hall et al., 2015; Mikes, 2016; Power, 2016) and have highlighted the benefits of risk management through the use of mechanisms such as risk matrices, risk expertise and risk information in facilitating strategic and operational decision-making.

In the public sector, risk management has often been used to establish and maintain legitimacy and reputation and to comply with requirements set by public sector regulators, while avoiding risky activities at all costs (Hood, 2002; Power, 2004; ANAO, 2014a). However, the benefits of risk management in decision-making in the Australian public sector have also been recognised. There has been continual pressure on the public sector to take risk management seriously and for governments to have sound risk management practices to manage not only accountability and public expectations but also decision-making and performance (ANAO, 2014b; Department of Education, Training and Employment 2012; RiskCover, 2011). With respect to the public sector, researchers have identified a comprehensive list of risk management categories. These include risk management for 1) managing compliance, 2) preventing undesirable events, 3) preparing for uncertainty, 4) program/project design and delivery, 5) prioritising resources, 6) developing and reviewing policies and providing advice, 7) business
planning, 8) developing and implementing strategies and reviewing associated performance and 9) seeking opportunities (ANAO, 2009; 2014b; McPhee, 2005a, 2014; Mcphee and Richards, 2011).

Risk management in decision-making in the public sector is complex and multidimensional because of the diversity of stakeholders (Kahalas, 1976). Therefore, public sector regulators have called for risk management to be used in determining courses of action and in relevant strategic and operational decisions:

It is not until organisations use risk management as a preferred tool for all line managers in the delivery of organisational outputs will the lasting benefits of risk management be realised. (McPhee, 2002, p. 17)

Negligent or poor risk management in decision-making can result in the misuse of public funds or delayed outcomes. For example, an apparent lack of risk management in the Australian government’s Home Insulation Program resulted in the failure of program delivery, danger to the public and loss of life (Hanger, 2014). Despite the inherent risks of injecting funding into an unregulated, inexperienced industry, the administrative department failed to conduct due diligence in the planning and implementation of a safe and effective project. The public servants involved in management of the project failed to analyse the critical risks or develop strategies to manage them (Hanger, 2014).

Another example of poor risk management by the public sector was seen in the Australian Defence Force’s Multi-Role Helicopter Program (ANAO, 2014b). Eighty per cent of the funding was used to meet only 57% of the program’s objectives, and the program was not completed until four years after its expected completion date. The failure to identify high-risk areas, such as contract management and the products’ capability requirements, hindered the progression of the program (ANAO, 2014b).
Previous failures in risk management have led to a shift in focus from more formal and technical practices to the embedding of risk management into organisations. In recent decades, there has also been increased attention on the use of informal mechanisms to create effective corporate governance (Department of Finance, 2014). Typical suggestions in the public sector include establishing and maintaining formal, systematic risk management systems, designing ‘fit-for-purpose’ customised risk management practices, incorporating risk management into usual business operations and decision-making (ANAO, 2011; McPhee and Richards, 2011; Department of Finance, 2014) and developing different approaches to risk management depending on the types of risks involved (ANAO, 2014a, 2014b). These recommendations aim to improve risk management practices to achieve better outcomes and performance (McPhee, 2005a).

Considering the importance of risk management in decision-making, this thesis seeks to better understand the factors that influence risk management in decision-making. The next section provides a review of the research on the factors shaping risk management practices.

2.4 Factors shaping the development and evolution of risk management

Extant academic and practitioner literature has examined various factors shaping the development and evolution of risk management. These include the influence of central government (Woods, 2009), the use of risk-related technologies (Skaerbaek and Vinnari, 2010; Woods, 2009), stakeholders involved in risk management activities (Spira and Page, 2003; Arena, Arnaboldi and Azzone, 2010; Mikes and Kaplan, 2013), other organisational factors (Mikes and Kaplan, 2013) and risk culture (Palermo et al., 2017). Although many of the factors identified in this section come from private sector research, they are thought to be applicable to the public sector. The following sections review the literature which examines these factors in
the development and evolution of risk management and how these factors may also shape risk management in the Australian public sector.

2.4.1 Influence of central government

In the context of the public sector, central governments have been found to have a considerable influence on the risk management practices of regional governments, including the level of risk management embedded in operations, the facilitation of shared learning and the scope of risk management activities (Woods, 2009). For example, a central government review of a local government program may compel the local government to change its resource priorities in its own risk management systems.

Central governments have also influenced government agencies’ perception of risk and what to focus on in risk management. For instance, Comcover was established in 1997 to systematically identify, measure and report on financial risks across the public sector and to manage insurable risks of government agencies, replacing the non-insurance policy that had been in place since 1909 (Barrett, 2003). During the 1990s, risk management was preoccupied with accountability, conformity, internal controls, the role of internal and external auditors from compliance and assurance perspectives and the existence of formal processes and documentation of risk management (Barrett, 1996a, 1996b). For example, Barrett (1996b) states:

Parliament will continue to expect us to use a risk management approach to address financial stewardship and what are typically described as compliance issues. The emphasis is on control and the need for assurance.

(p. 11)
To a lesser extent, public sector reforms also saw the gradual, but important emergence, in the late 1990s, of risk management in performance outcomes. Following the publication of guidelines by the Management Advisory Board in 1996 and the joint Australian/New Zealand Risk Management Standard 4360 in 1999, the view of risk management expanded from simply identifying business risks to prospecting for opportunities (McPhee, 2002). For example, it has been suggested that risk management techniques be incorporated into everyday decision-making by managers, instead of using them for compliance purposes only (Barrett, 1996a; Barrett and Cronin, 1998; Barrett, 1999b).

In the early 2000s, the primary focus of central government was on the use of risk management to achieve compliance and effective governance through formal, disciplined arrangements (Barrett, 2001a, 2001b, 2002; McPhee, 2002; Barrett, 2003). With the implementation of public sector reforms, including downsizing, privatisation, commercialisation and corporatisation, the subject of risk management tended to be grouped with themes of regulation, compliance and governance, rather than retaining its own importance.

However, results-oriented risk management became more prominent in the 2000s. The concept of resilience, in which ‘a well governed, progressive and financially sound organisation’ (McPhee, 2002, p. 3) responds to the upsides and downsides of uncertainties, has emerged and spread across the public sector. As a result of increasing pressure on the public sector from globalisation, technological innovation, budget constraints and community dissatisfaction (Barrett, 2001b), the primary focus shifted to the pursuit of results-oriented characteristics such as productivity, marketisation, service orientation, decentralisation, policy and accountability (Kettle, 2000). Thus, aspirational beliefs in the public sector were promoted by highlighting that risk management was beneficial in providing less costly, more tailored and higher quality services to the public.
At the same time, calculative risk management, involving risk performance indicators, benchmarking measures and cost-benefit analyses to measure performance against outputs and outcomes, increased in popularity, and organisations were encouraged that ‘as far as possible, it is desirable to make that [risk] assessment in quantifiable terms’ (Barrett, 2001a, p. 38).

Since the 1990s, risk management frameworks used in the public sector have matured, and the late 2000s saw an increased emphasis on sound governance and decision-making (Barrett, 2005). Formal risk management was considered an inherent part of organisational management practice and was no longer discretionary. Stronger administration-oriented risk management practices, such as increased documentation requirements, were implemented across public sector organisations. Since 2005, there has been more emphasis on risk management approaches across a broad range of decisions (McPhee, 2005a; Victorian Managed Insurance Authority, 2015). In strategic and operational decision-making, public sector organisations have been urged to engage with risks at all levels using appropriate strategies to achieve productivity, efficiency and innovation.

In summary, the initiatives by central governments have guided the perception of risks and the focus of their risk management across government agencies, from accountability, conformity, internal controls to performance and corporate governance to decision-making. In this sense, examining initiatives of central governments provides a broader perspective of how risk management in the Australian public sector has shaped and evolved. The influence of central governments on public sector practices has been widely recognised in public sector research. However, this perspective may not provide sufficient ground to understand how risk management is integrated into decision-making by an organisation or its individual members.
2.4.2 Risk technologies

Much of the academic literature has focused on the dynamics between the use of risk technologies and stakeholders involved in risk management. Examples of these include how risk management framework is constructed through organisational members’ dynamics (Demortain, 2016), how risk maps are developed and used to facilitate decision-making by building confidence and commitment in organisational members (Jørgensen and Jordan, 2016) and how risk indicators and matrices can influence members both positively, such as facilitating discussions and providing guidance, as well as negatively, such as hindering meaningful activities (Hall and Fernando, 2016).

Views on the effects of risk management technologies such as risk reporting systems are mixed. From one perspective, these technologies highlight the importance of business experience and relational skills in facilitating the use of risk management in the public sector (Palermo, 2014). In addition, risk technologies are integrated into organisations in different ways, which in turn, leads to diverse risk management practices. Information and communication technologies associated with risk management may negatively affect the usefulness of risk management—organisational members may benefit from better training, promptness in sharing information and improved quality of service delivery through more effective interaction (Palermo, 2014).

In contrast, using a private sector example, Vinnari and Skærbæk (2014) highlight how risk reporting approaches based on rules and compliance may negatively affect risk management. Their findings indicate that managers involved in risk management may believe the use of risk technologies to be a bureaucratic exercise, rather than a means of managing actual risks. This concurs with Hall and Fernando’s (2016) assertion that risk measurement technologies, such as risk matrices and risk indicators, ‘serve to displace meaningful actions by focusing undue
attention on ensuring compliance with mandated procedures’ (p. 72). These private sector phenomena may also occur in the public sector.

In the Australian public sector, a standard set of risk technologies such as risk management frameworks, which includes policies, oversight committees, training and relevant documentation systems, were considered essential for improving accountability and performance (Barrett, 1996b, 1999a, 2018). Managing risks in record keeping in the public sector can be considered ‘an effective insurance policy and business facilitator’ (Barrett, 2005).

More recently, primary formal mechanisms for risk management, such as evaluation methodologies, internal control structures, clear roles and responsibilities and relevant information systems, are considered crucial. The use of risk technologies in the Australian public sector has shifted—it is now recommended that corporate governance frameworks, including those of risk management, be customised to organisations instead of following generic ‘best practice’ approaches (Barrett, 2001b, 2002, 2005). However, evidence from the literature on the negative effects of generic risk management suggests that the customisation of risk management is still underdeveloped (Huber and Scheytt, 2013; Power, 2009).

Risk technologies play an important part in shaping and developing the methodologies of managing risk in the Australian public sector. Prior research largely focuses on how risk technologies may facilitate better risk management. However, they have not delved into how risk technology may shape organisational members’ thoughts and beliefs toward risk management in their organisation. This thesis will address this gap.

2.4.3 Stakeholders involved in risk management activities

According to Palermo (2014), internal and external stakeholders in the public sector who influence risk management practices include governance groups such as audit committees and boards, professional organisations such as the Chartered Institute of Public Finance and
Accountancy, the Association of Insurance and Risk Managers in Industry and Commerce and the Association of Local Authority Risk Managers, risk officers and experts, and users of risk management practices (e.g. managers). The dynamics between internal risk management stakeholders, such as chief risk officers, risk specialists and managers, internal auditors and management accountants, also shape risk management practices.

Since the late 2000s, Australian public sector entities have been encouraged to involve all members in risk management and to use risk management in everyday decision-making (Barrett, 2005; McPhee, 2005b; McPhee, 2006b). The involvement of all organisational members is described as fostering ‘risk management knowledge, skills and professionalism’ (McPhee, 2006a). This initiative extends the responsibility for risk management from senior management to a broader range of stakeholders.

As external stakeholders, public sector regulators have also contributed to shaping risk management practices in the Australian public service. For example, they have shown leadership by calling for risk management to be used as a means to assisting strategic and operational planning (Barrett, 2001a). This dynamic between regulators and agencies may have encouraged the use of risk management in resource prioritisation in some organisations (Barrett, 2001b) and in the provision of policy advice from public servants to government ministers (Barrett, 2003).

Exploring stakeholders involved in risk management activities may provide an opportunity to investigate how stakeholders use risk management in their operations. However, prior research tends to focus on visible risk management stakeholders, such as head of government agencies, chief risk officers, risk specialists and managers, overlooking actual users of risk management, such as operators. This thesis will examine the views of both the executives and the operators.
2.4.4 Other organisational factors

Mikes and Kaplan (2013) offer several contingent determinants of risk management, including types of risk, interdependencies within the task environment, the velocity of risk evolution, the availability of data and knowledge about a particular risk, and the perceptions and assumptions about the relevance and reliability of risk tools by stakeholders involved in risk management. Interdependencies within the task environment influence how objectives are achieved by various groups in organisations—some organisations use extensive collaboration to accomplish tasks, while others employ temporary groups, such as project business units, who rely on the involvement of other team members to complete works. The velocity of risk evolution refers to the rate of development and changes occurring in existing and emerging risks within an organisation. If an organisation is facing rapidly emerging and developing risks, risk velocity is high and the organisation is expected to manage risks promptly. It is thought that the level of interaction and communication in risk management is particularly subject to interdependencies and velocity. Other notable determinants in shaping risk management practices include the availability of data and knowledge about risks and organisational members’ perceptions and assumptions regarding the relevance and reliability of available risk tools. If risk experts and organisational members involved in risk management have confidence that risk tools developed and implemented by the organisation are pertinent and sound, this influences the extent to which risk management is used.

Other factors involved in the development and evolution of risk management include the size of the organisation and its various risk management mechanisms (Woods, 2009; Deloitte, 2012; Protiviti and Institute of International, 2012; EY Global Regulatory Network, 2014; Protiviti, 2014). Woods (2009) found that the larger the organisation, the more likely it will be to use formal risk management systems. The EY Global Regulatory Network (2014) found that formal training, clarification of the level of risk tolerance, regular assessment of risk management
capabilities and a shared understanding of purpose, values and risk culture between risk overseers, leadership teams and other organisational members is crucial in the development and implementation of risk management practices.

2.4.5 The role of risk culture

Drawing on the gaps discussed in the previous section in relation to a lack of understanding of individual members’ beliefs and attitudes from all levels of an organisation towards risk management, this thesis focuses on risk culture as a major factor influencing risk management. Interest in how organisational members’ beliefs and attitudes influence the practice of risk management is emerging (Ashby, Palermo and Power, 2012; Palermo et al., 2017). Hence, this thesis examines the use of risk management from the perspective of its relationship to organisational members’ beliefs and attitudes and the influence of the risk culture on the use of risk management in decision-making.

The existing literature on risk culture suggests that it may have various effects on risk management depending on the organisation. Increasing attention has been paid to risk cultures that influence the development and implementation of risk management practices (Ashby et al., 2012; Protiviti and Institute of International, 2012).

Much of the research on the role of risk cultures comes from the contribution of practitioners. This stream of research makes the normative assumption that organisations will nurture and maintain strong, sound and healthy risk cultures and embed organisational risk-related values into organisational members’ behaviours and attitudes (Bank Governance Leadership et al., 2014; Deloitte, 2012; Deloitte, 2014; Enterprise Risk Management Initiative, 2013; EY Global

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1 The concept of a risk culture is discussed in detail in Chapter 3.
Regulatory Network, 2014; Protiviti & Institute of International, 2012; Protiviti, 2014). A strong risk management culture is perceived as one that is consistent across organisations and is guided by senior management (Farrell and Hoon, 2009; Protiviti, 2014). The Enterprise Risk Management Initiative (2013) describes a healthy risk culture as one characterised by an effective flow of risk information, an understanding of and involvement in risk management by all members of the organisation and a shared enthusiasm for risk management between senior managers and risk overseers and organisational members. Similarly, Deloitte (2012) defines a healthy risk culture as one in which the awareness and attitudes of organisational members facilitate appropriate risk-based decision-making. The common components of these risk cultures are the shared values, perceptions and attitudes of organisational members that facilitate the use of risk management in decision-making.

Enthusiasm for calculative methods used to measure risk culture is also notable in the professional literature, which highlights the benefits of having a sound, mature risk culture (Deloitte, 2012; 2014) and supports the measurement and monitoring of risk cultures. For example, Deloitte (2012) proposes that risk culture can be measured and reported to senior management by calculating the level of risk competence and identifying organisational members’ motivation for managing risk, how organisational members interact with each other, how the organisational environment is structured and what is valued. This proposal implies that the cultural aspects of risk management are quantifiable and consciously manageable.

In addition, the professional literature views the top-down approach to risk management as the norm (Deloitte, 2014). In the past, senior managers and board members were upheld as risk culture champions, and it was assumed that their attitudes and assumptions would automatically be embedded in the attitudes and assumptions of other organisational members. Consequently, the influence of middle management and other staff members in risk culture was thought to be absent or passive. For instance, in a survey of insurance companies (Protiviti, 2012), the major
indicators of risk culture were found in discussions among executives and directors, rather than in those of other organisational members. Accordingly, many strategies used in the development of risk culture originated from senior leadership. A survey by Deloitte (2014) exposed four major top-down approaches in the development of a desirable risk culture: active involvement of senior management, the influence of senior management over risk management professionals, a shared understanding of the key risks by management and clear documentation of the responsibilities for risk management within an organisation.

The academic literature takes a different approach to examining risk culture in the private sector. Palermo et al. (2017) and Power et al. (2013) investigated risk culture in financial organisations by engaging with executives and risk professionals to explore the way risk culture is perceived, managed and changed. Risk cultures in financial organisations were found to be continually influenced by both formal and informal factors. Interestingly, the authors noted that an organisation may not just possess a single, common risk culture, but have multiple risk cultures. Risk cultures are complex and involve many trade-offs arising from the attitudes and behaviours of organisational members. These trade-offs may arise from the ambivalence associated with, for instance, risk-taking and risk control, or flexibility and stability in risk management. These findings by Palermo et al. (2017) and Power et al. (2013) shed light on the continual interactions between executives and risk professionals and the complex nature of risk cultures.

As noted, most of the studies on risk culture have focused on how private sector organisations have developed, maintained, assessed and changed their risk cultures in response to the increasing attention paid to the risks inherent in a wide range of activities, including planning and decision-making (Deloitte, 2014; Protiviti, 2012). For example, it is thought that the global financial crisis (GFC) was partly attributable to the detrimental risk culture of the financial services sector excessively valuing risk taking, which was changed to the focus on risk controlling after the GFC (Ashby et al., 2012; EY Global Regulatory Network, 2015).
Risk culture has also influenced the focus and practices of risk management through impacting organisational members’ understanding of risk management in the Australian public sector. In the Australian public sector, the notion of risk culture began to emerge in the late 2000s. Prior to this, risk culture had been briefly mentioned in the public sector literature, which urged organisations to be aware of risks and encouraged organisational members to share their collective understanding of and to participate in risk management. For example, risk management was encouraged as a way of thinking by organisational members (McPhee, 2005a, 2006), which was in line with the concept of risk culture in the private sector. During the same period, risk management culture was considered more as a ‘risk assessment’ culture, which was more aligned with the ERM approach of identifying and managing risks throughout organisations (McPhee, 2006). Public sector regulators and agencies historically defined risk culture from a compliance perspective. More recently, the important role of risk culture in various activities has been promoted widely by government agencies (Department of Finance, 2014; Victorian Managed Insurance Authority, 2015). Risk culture is considered important in three ways: ensuring that risk management is a continuous activity; embedding risk management coherently at all levels across organisational divisions; and encouraging a better understanding of the role of risk management in corporate planning, reporting, decision-making and management practices (McPhee and Richards, 2011). Since 2014, risk management and risk culture has become an important agenda in the governance of the Australian public sector under the Public Governance, Performance and Accountability Act (Department of Finance, 2014).

Risk cultures that support risk management in decision-making have recently been promoted across the Australian public sector (McPhee and Richards, 2011). To implement this, public sector regulators have called for the development of a culture of risk management that enables prudent strategic decision-making and accountability (Comcover, 2008; ANAO, 2014b).
Comcover (2008) notes that a positive risk culture should be promoted to facilitate awareness and acceptance of risks and encourage their appropriate management in decision-making processes. ANAO (2014a; 2014b) supports this view by recommending a risk management culture that enables members to engage with risks and embed risk management into all governance and business practices. Under the Commonwealth Risk Management Policy, public sector organisations are also expected to nurture a ‘positive’ risk culture (Department of Finance 2014, p. 15).

Despite the recognition of the role of risk culture in the public sector, there is still little understanding of how risk culture is operationalised in public sector organisations and embedded in organisational members beliefs and attitudes toward risk management. Therefore, this thesis examines the research question, ‘How does risk culture influence the use of risk management in decision-making?’

2.5 Summary of Chapter 2

This chapter reviewed the literature pertaining to risk management and risk culture in both the private and public sectors, finding that the public sector has inherited many aspects of risk management from the private sector. During the 2000s, enthusiasm towards ERM prevailed and both private and public sector organisations focused on implementing this approach. Literature highlights that there has been an increasing awareness of risk by the public, and the public sector responds by placing greater emphasis on risk management.

Despite its prevalence and the perceived benefits associated with focusing on corporate governance, internal controls and compliance, risk management has been criticised for various reasons, including its potential for box-ticking, risk aversion, the transferral of risk to avoid

Conversely, the research also shows that the use of risk management in everyday tasks (Caldarelli et al., 2016) helps create opportunities to identify, document and debate risks (Tekathen and Dechow, 2013), engages users of risk management in everyday and specialised communication and debates (Jordan et al., 2013; Jordan et al., 2018) and serves the dual purpose of being ‘useful for risk management purposes’ as well as ‘legitimation and confidence building’ (Thansen & Skærbæk, 2018, p.11). This research does not deny the downsides of risk management; however, it delves into the additional roles of risk management in organisations by exploring various formal risk management practices and the dynamics between actors involved in organisational risk management.

Various factors shape everyday risk management in organisations. These factors include, but are not limited to, the influence of central government, risk technologies such as risk management frameworks and risk maps and measurements, and the stakeholders involved in risk management.

In particular, the role of risk culture in influencing risk management practices was discussed. Practitioner research has examined risk culture from a normative perspective, focusing on the positive effects of risk culture, the enthusiasm for the use of calculative methods to measure risk culture and the use of top-down approaches, which are still endorsed by some Australia public sector organisations. However, there is little evidence or knowledge about the effects of risk culture in the public sector. This thesis aims to fill this gap in the literature.

Chapter 3 gives an overview of the analytical framework for this thesis, elaborates on the concepts of risk culture and its dynamics, risk cultural environments and formal and informal risk management mechanisms and their influence on risk management in decision-making.
Chapter 3: Analytical framework

3.1 Introduction

Chapter 3 discusses the analytical framework used to address the research question regarding risk culture. This study makes use of prior studies on organisational culture, adopting the theories of Schein (2010), Martin (2001) and Cameron and Quinn (2011). Schein’s (2010) organisational cultural theory provides a framework that may be used to examine the concept of risk culture and to analyse contemporary risk culture in the public sector. Martin’s (2001) theoretical perspectives of integration, differentiation and fragmentation, which represent cultural consensus, conflicts and fragmentation/ambiguity, respectively, have been adopted to show how these interactions operate within risk cultures and influence risk management in decision-making.

This thesis also examines the role of two artefacts—risk cultural environments and risk management mechanisms—on organisational members’ beliefs and attitudes and in the use of risk management in decision-making. To explore the notion of risk cultural environments, Cameron and Quinn’s (2011) typology of organisational cultural environments has been adopted. Using this typology, this thesis explores how cultural environments pertaining to risk management determine the use of risk management in organisations. In addition, this thesis investigates the use of formal and informal risk management mechanisms to gain further insight into organisational members’ beliefs, attitudes and behaviours with respect to risk management.

The three frameworks from Schein (2010), Martin (2001) and Cameron and Quinn (2011) are integrated to explore various manifested forms of risk culture in order to address the research question in a more holistic manner. Schein’s (2010) and Martin’s (2001) frameworks help to understand risk culture through examining organisational members’ beliefs and attitudes towards the usefulness of risk management. Cameron and Quinn’s (2011) framework helps to
understand risk culture through investigating risk cultural environments. This chapter is structured as follows: First, a rationale is provided for the adoption of organisational culture studies to address the research question. Second, concepts derived from these studies are used to define and analyse risk culture. Third, Martin’s (2001) three perspectives are employed to facilitate an understanding of the dynamics of organisational members’ beliefs and attitudes. Fourth, the relationship between organisational culture and member behaviour in the context of risk culture and the use of risk management is investigated. Fifth, organisational cultural environments and their application to risk culture are discussed. Finally, risk management mechanisms and their influence on organisational members’ beliefs, attitudes and behaviours are explored.

3.2 Rationale for the adoption of organisational culture studies for the analytical framework

The thesis examines the research question and its sub-research questions through the analytical framework which is grounded on the organisational culture studies. The main research question, “How does risk culture influence the use of risk management in decision-making in the public sector?” are examined by two sub-research questions from cultural perspectives:

1. Are organisational members’ beliefs and attitudes regarding the usefulness of risk management related to their use of risk management for decision making in the public sector?
2. How do risk cultural environments and risk management mechanisms influence members’ beliefs and attitudes and the use of risk management for decision making in public sector organisations?
Organisational culture literature particularly helps to frame the first sub-research question, organisational members’ beliefs and attitudes toward risk management, in a systematic way and to provide relevant theoretical concepts to address the second sub-research question, risk cultural environments and risk management mechanisms, in an integrated way to understand how these may influence their use of risk management in decision-making.

This thesis draws on the organisational culture literature to shape the notion of risk culture for two reasons. First, a few of the existing studies on risk culture have successfully adopted concepts from the literature to make sense of contemporary risk management practices (Protiviti, 2012; Power et al., 2013). It has been argued that risk culture is an aspect of organisational culture since it refers specifically to the way an organisation manages risk. In this sense, a risk culture is interpreted as ‘a specific kind of framing of the culture problem’ (Power et al., 2013, p. 14). Second, the literature on organisational culture contains a rich body of theories that may help in the understanding of the so-called ‘terra incognita’² (Martin, 2001, p. 85) of current risk management phenomena. Given that the influence of culture on organisational members can be significant (Schein, 2010), this thesis argues that the use of risk management by organisational members may be determined by the risk culture in which they are operating.

There are many organisational cultural theories that may be used to examine the influence of organisational cultural phenomena on organisational members (O’Reilly, Chatman and Caldwell, 1991; Denison and Neale, 1999; Hofstede, Hofstede and Minkov, 2010; Schein, 2010). Hofstede et al. (2010) suggest that a culture can explain group behaviours, feelings and thought patterns, providing insight on the criteria for distinguishing the members of one group

² In Latin, ‘terra incognita’ means ‘unknown land’. Martin (2001) implies that the literature in the organisational culture field may help to explain unknown/unexplored phenomena.
from another. Denison and Neale (1999) show that the performance and effectiveness of an organisation is linked to its organisational culture and argue that organisational cultures exist and can be reliably measured. A study by Denison and Mishra (1995) shows that the extent of flexibility, openness and responsiveness in an organisational culture is positively associated with organisational growth, while the extent of integration, direction and vision is associated with organisational performance.

From the available organisational cultural theories, this thesis adopts the theories of Schein (2010) and Martin (2001) for examining risk culture. Schein’s (2010) theoretical approach is used for cultural analysis because its framework provides clear and simple concepts that help to describe the elements and interactions of culture development and operationalisation in organisations. Martin’s (2001) analytical framework is used to complement Schein’s (2010) approach.

Schein’s (2010) study focuses on cultures that include specific values such as ‘structural stability, depth, breadth, and patterning or integration’ (p. 16). Schein’s (2010) cultural theory describes how culture can create stability and regularity within the ‘social order’ (p. 3) of the organisation. From this perspective, ambiguity and conflicts within an organisation tend to be ignored or considered undesirable; therefore, Schein’s (2010) theory explains only certain aspects of cultures that exist within organisations. Schein’s concept of integrated and congruent organisational culture is adapted in the private sector risk management context by practitioners (e.g. Levy, Lamarre, and Twining, 2010) to prescribe how organisational risk culture can be diagnosed and organisations can prevent risk culture failures and improve their risk culture weaknesses. However, application of Schein’s concepts to public sector risk management research is scant.
Martin’s (2001) approach suggests that, while some organisational cultures may demonstrate characteristics of sharing and integration, as per Schein’s (2010) theory, cultures are not made up of simple, congruent, one-dimensional values but comprise a complex set of beliefs. Martin’s (2001) theory embraces the conflict and ambiguity that exist within organisational cultures, thereby providing a more realistic and holistic framework.

A key rationale for pursuing risk management in the public sector is to enhance government accountability. The common theme from both Schein’s (2010) and Martin’s (2001) theoretical concepts lies on exploring individual organisational members’ beliefs and attitudes on risk management to understand different organisational cultures. Applying such theoretical concepts to the public sector risk management enables this study to further investigate how improving accountability to a wide range of stakeholders through making better decisions - the consistent goals of the public sector in recent decades - is related to different organisational members’ beliefs and attitudes and operationalised in practices when managing risk.

Drawing on these theoretical concepts, therefore, this thesis may provide clarity and richness to the concept of risk cultural phenomena in the public sector context. The following section discusses how organisational cultures may be analysed and how the concepts derived from organisational culture studies can be applied to risk culture and risk management fields.

To examine risk cultural environments, this thesis adopts Cameron and Quinn’s (2011) typology of organisational cultural environments. Prior research shows that cultural environments can influence organisational members’ thoughts and attitudes (Cooke and Szumal, 2000; Kennedy and Deal, 2000; Hofstede, 2001; Cameron and Quinn, 2011; Kotter, 2011). Cooke and Szumal (2000) categorised 12 dimensions of behavioural norms into three fundamental organisational styles: constructive, aggressive/defensive and passive/defensive. Ouchi (1979) describes three organisational control mechanisms, market, bureaucracy and clan
controls, that bring about different types of cultural environments. These studies illustrate the broad range of theories on the factors that influence the development of organisational culture, which, in turn, affects organisational performance and decision-making for purposes such as innovation and finance (Kotter, 2011; O’Donovan, 2011).

This thesis uses Cameron and Quinn’s (2011) classification to describe types of risk culture in the public sector since it provides a comprehensive set of organisational characteristics relevant to cultural environments in the public sector. According to Cameron and Quinn (2011), rather than adopting one type of cultural environment to address all problems, a balance of cultural environments within an organisation is important for effective problem-solving. This typology is based on the principle that an organisation can have a mix of cultural environments, which may provide a more holistic picture of organisational cultural environments.

3.3 Definition of risk culture

Among other factors, risk culture has been found to have a significant influence on risk management practices for major decision-making and other behaviours in institutions (Ashby et al., 2012; Protiviti, 2012). Despite this, there is no common agreement on the concept of risk culture (Power et al., 2013). This may be because of the ‘moveable, fluctuating, permeable, blurred’ characteristics of culture (Martin, 2001, p. 332), making it difficult to identify clear boundaries.

Because of the dynamic nature of risk cultures, various definitions can be found in the academic and professional literature. Table 3.1 provides some examples.
Table 3.1 Definitions of risk culture

<table>
<thead>
<tr>
<th>Academic Literature</th>
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<tbody>
<tr>
<td>Adam, Beck, and Loon, 2000, p. 5</td>
<td>The radicalisation of the response to new challenges enforced upon the world by technologies and practices.</td>
</tr>
<tr>
<td>Bozeman and Kingsley, 1998, p. 111</td>
<td>An organisation’s propensity to take risks as perceived by the organisation’s managers.</td>
</tr>
<tr>
<td>O’Donovan, 2011</td>
<td>A risk culture is based on particular beliefs and assumptions, which may be clustered according to specific cultural tenets, namely risk, integrity, governance and leadership, decision-making, empowerment, teamwork, responsibility and adaptability. These tools are expressed in everyday workplace practices via attitudes and behaviours and, when expressed by leaders, serve as powerful (human) culture-embedding mechanisms.</td>
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<table>
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<tr>
<th>Practitioner Contributions</th>
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<tbody>
<tr>
<td>Enterprise Risk Management Initiative, 2013</td>
<td>The common way in which members of an organisation (e.g. employees) understand and approach risk.</td>
</tr>
<tr>
<td>Farrell and Hoon, 2009</td>
<td>The system of values and behaviours present in an organisation that shapes the risk decisions of management and employees.</td>
</tr>
<tr>
<td>Institute of International Finance, 2009</td>
<td>The norms of behaviour for individuals and groups within an organisation that determine the collective ability to identify and understand, openly discuss and act on the organisation’s current and future risk. Individual and group behaviour within an organisation that determines the way in which the company identifies, understands, discusses and acts on the risks the organisation confronts and takes.</td>
</tr>
<tr>
<td>The Institute of Risk Management, 2012</td>
<td>The values, beliefs, knowledge, attitudes and understanding about risk shared by a group of people with a common purpose, in particular the employees of an organisation or of teams or groups within an organisation.</td>
</tr>
<tr>
<td>Compliance Australia, 2012</td>
<td>The system of values and behaviours throughout an organisation that shape risk decisions.</td>
</tr>
<tr>
<td>Institute of Actuaries of Australia, 2013</td>
<td>The way we [the organisation] do risk around here.</td>
</tr>
<tr>
<td>Financial Stability Board, 2014</td>
<td>The institution’s norms, attitudes and behaviours related to risk awareness, risk-taking and risk management.</td>
</tr>
<tr>
<td>Risk Management Association and Protiviti, 2014</td>
<td>The set of encouraged and acceptable behaviours, discussions, decisions and attitudes towards taking and managing risk within an institution that reflects the shared values, goals, practices and reinforcement mechanisms that embed risk into the institution’s decision-making processes and risk management into its day-to-day operations.</td>
</tr>
<tr>
<td>Department of Finance (Australia), 2014</td>
<td>The set of shared attitudes, values and behaviours that characterise how an entity considers risk in its day-to-day activities.</td>
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</table>

Although the concept of risk culture has not yet been synthesised, definitions in the professional literature highlighted in Table 3.1 show broad similarities with respect to the attitudes and beliefs of organisational members about risks and their collective capacity to manage risks.
Considering risk culture as general norms of behaviours for organisational members or shared beliefs and values among organisational members (Institute of International Finance, 2009; Risk Management Association and Protiviti, 2014), professional literature tends to perceive that expected values and behaviours which are congruent to prescribed values as good risk culture, while any deviation is likely to be treated as weakness in risk culture. Professional studies have borrowed definitions from the existing organisational culture research and have applied them to risk and risk management with an emphasis on groups and organisations. However, most of the professional studies discussed in this section tend to emphasise the observable artefacts, the aspirational espoused beliefs and values and the measurement of current and desired risk cultures and risk management practices in organisations.

Few definitions of risk culture have been provided in the academic research. Some authors define risk culture from the perspective of risk-taking and risk aversion (Bozeman and Kingsley, 1998), while others provide a broader definition derived from the concept of organisational culture (O’Donovan, 2011). Overall, the concept of risk culture is mostly found in the professional literature and is seldom seen in the academic literature (Power et al., 2013). The few academic studies on risk culture have tended to focus on the development and purpose of risk culture in organisations than on defining risk culture.

Based on the definitions from the existing literature, and in the context of the research question, this thesis broadly defines risk culture as the beliefs and attitudes of organisational members regarding risk and risk management.
3.4 Organisational culture—the application of BUAs, espoused beliefs and values and artefacts to risk culture

This study explores the notion of risk culture through concepts found in the organisational culture literature, including those provided by Schein (2010). According to Schein (2010), an organisation’s culture is manifested through three levels: BUAs, espoused beliefs and values, and artefacts.

BUAs are the invisible beliefs and attitudes held by organisational members. According to Schein (2010, p. 29), these assumptions determine ‘what to pay attention to, what things mean, how to react emotionally to what is going on, and what actions to take in various kinds of situations.’ Therefore, they are communicated and perceived subconsciously within an organisation. Assumptions include those about the identity of the organisation and its unspoken norms, which strongly drives organisational behaviours, perceptions and strategies. Members of organisations may subconsciously make observations and decisions and behave in ways that conform with their underlying assumptions. Organisational members resist challenges to their BUAs. This aspect of culture is difficult to investigate since BUAs are not explicitly articulated. However, although it may be arduous and time-consuming, it has been argued that the best way to understand a culture is to identify its BUAs. Although certain previous research has assumed that the BUAs of members are consistent within organisations (Martin, 1992), in practice it has been observed that they can vary widely (Martin, 2001).

Organisational culture is also determined by espoused beliefs and values, which are the organisation’s public and observable statements. Examples of these include mission statements, goals, aspirations and policies. If organisational members unanimously agree that these beliefs and values are reputable or acceptable, they may become shared assumptions. Espoused beliefs and values may reflect the subconscious behaviours of members in the organisation, the current
ideology or philosophy of the organisation and/or the organisation’s desired behaviours and aspirations for the future. To investigate espoused beliefs and values, it is useful to distinguish between those that are aligned with BUAs and that may affect performance, those that reflect the ideology or philosophy of the organisation and those that are aspirational. These distinctions may help explain any deviations from the official beliefs and values of the organisation (Martin, 2001).

The third level, artefacts, is the most apparent manifestation of an organisational culture as it comprises visible objects, products and processes. Examples of these tangible components include the observable behaviour of members, the organisation’s physical arrangements, rituals and stories, documented processes, structures and charts. BUAs can be manifested in an organisation’s artefacts. Artefacts can also be affected by aspirational espoused beliefs and values, since an organisation’s official objectives and policies often shape structures and procedures. For example, if an organisation formally endorses a team-oriented culture, it may develop procedures that encourage teamwork in achieving goals and reward team performance.

Corresponding to the concept of BUAs described in the organisational culture literature, the BUAs of risk culture can be perceived as tacit assumptions that motivate and guide organisational members’ behaviours, attitudes and thoughts towards risk and risk management. In their study on the risk culture of financial organisations, Power et al. (2013) explored organisational members’ instincts, attitudes, habits and behaviours through interviews. Palermo (2014) also studied organisational members’ attitudes towards risk management in the public sector, finding that the more mature in the way risk management frameworks used, the more likely organisational members were to perceive risk management as something could easily be done with standard business experience and relational skills, rather than something that required specialist technical and professional risk management knowledge. This can be interpreted as
BUAs of organisational members where risk management can be considered as part of the organisational usual business processes and is helpful in a member’s everyday jobs.

Espoused beliefs and values in the context of risk management can be found in the form of explicitly stated risk management policies, strategies and plans. An example of espoused beliefs and values for risk management in the public sector is the policies of central government, which include the official risk management beliefs and values that are promoted and imposed onto the public sector (Woods, 2009). McPhee (2011) suggests that policy initiatives in the Australian public sector are important elements that shape the use of risk management by public servants. A specific example of espoused beliefs and values in the risk culture context is the Australian government’s publication of its risk management statements and positions, including policies, strategies and tolerance levels, which are used to communicate with staff and the public. Once these official beliefs and values have been accepted by members of an organisation, they may be incorporated into the members’ BUAs about risk management.

Artefacts in the risk management context are the most observable manifestation of a culture; hence, many examples of these have been documented in previous research. Artefacts of a risk culture include, but are not limited to, an organisation’s risk oversight structures, such as risk management committees (Ashby et al., 2012; Zhivitskaya and Power, 2016), risk appetite (Power, 2009; Power et al., 2013), risk management frameworks and their relationship with other management control systems (Demortain, 2016; Mikes and Kaplan, 2013) and risk management tools (Woods, 2009; Jordan et al., 2013; Vinnari and Skærbæk, 2014; Jørgensen and Jordan, 2016). These artefacts are adopted and used by organisational members and, therefore, contribute to an organisation’s risk culture (Power et al., 2013).

In summary, most of the existing research has examined the individual visible manifestations of risk culture in the private sector, rather than its holistic, fundamental nature. The research
that has directly examined the topic of risk culture has tended to focus only on risk-taking or risk-avoiding behaviours or on those who design and implement risk management practices rather than those who use risk management in decision-making. This thesis explores the definition of risk cultures and how they are operationalised in organisations holistically and focuses on understanding the BUAs about risk management in organisations.

Schein (2010) points out that espoused values and artefacts are easy to observe and difficult to interpret. Observers may not be able to determine an organisation’s culture from its artefacts alone since artefacts may show a different aspect of the organisation to that of the BUAs; therefore, it has been recommended to look beyond an organisation’s artefacts to the deeper level of BUAs. Schein (2010) particularly encourages researchers to have conversations with organisational members to analyse their behaviours and attitudes. As such, this thesis focuses on BUAs in analysing an organisation’s risk culture. This thesis also examines two types of artefacts—risk cultural environments and risk management mechanisms—and their influence on organisational members’ BUAs and use of risk management in decision-making.

3.5 Organisational members’ BUAs and their use of risk management in decision-making

3.5.1 Subculture

This thesis examines the dynamics of risk culture at all levels (Martin, 2001; Schein, 2010). Interactions that occur within organisations need to be explored in the context of both groups and individuals to fully understand the operationalisation of organisational culture. In other words, an organisational culture is influenced by various constituents within the organisation, otherwise known as subcultures.
Organisational culture continually changes and evolves because of the interactions between its members. Schein’s (2010) organisational cultural theory emphasises the importance of three subcultural cohorts: operators, engineers/designers and executives. Schein believes that harmonisation of BUAs between these subcultures in meeting organisational goals is key to organisational effectiveness. For the purposes of this study, the engineering/design and executive subcultures have been combined into one group. The engineering/design subculture comprises the designers and engineers of risk management practices—henceforth in this thesis, this group is referred to as the ‘risk management function’. The executive subculture represents an organisation’s leaders, who evaluate and approve risk management practices and establish the tone of the organisation. Members of the operator subculture have been identified as the main users and actors of risk management.

According to Schein (2010, p. 60), the engineer/designer subculture ‘represents the basic design elements of the technology underlying the work of the organisation’. Members of this group possess expertise on how proposed technologies are to be used in an organisation. The primary characteristics of this subculture are its system-oriented and process-focused approaches in conducting work. The main objectives of the engineering/design group are to develop and implement organisational processes, systems and solutions that are efficient, safe, reliable and consistent across the organisation. The group aims to reach consensus on certain processes within the organisation; hence, engineers/designers may find it challenging to align their assumptions with those of other subcultures, whose members may prefer different approaches.

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3 For the purpose of data analysis, the executive group and risk management function group are combined to maintain confidentiality of the identity of risk management function given the limited number of participants being interviewed. The combination is also justified based on the public sector literature which suggests that the two groups tend to share similar views on the usefulness of risk management in the public sector where regulators have heavily promoted risk management (Deloitte, 2018). This clarification is also explained in Chapter 4.
In the context of risk culture, the engineer/designer group designs and implements policies, processes and technologies and provides support associated with risk management. The engineers/designers of risk management have been investigated in a number of studies (Hall et al., 2015; Kaplan and Mikes, 2016; Power et al., 2013; Spira and Page, 2003). Their function is to guide organisational efforts in meeting compliance requirements, measure and model risks and provide risk information that affects performance and decision-making (Mikes, 2008). In particular, the risk management function helps organisations design and implement risk management (Power, 2007; Arena, Arnaboldi and Azzone, 2010).

The risk management function is critical in developing and implementing risk management practices, potentially playing an important role in shaping the risk culture of an organisation. For example, if the members of this group perceive compliance to be an ‘independent overseer’ (Kaplan and Mikes, 2016, p. 11) and emphasise documentation and accountability of risk management processes, they may introduce a rule-based risk cultural environment to the organisation. In contrast, the risk management function may proactively facilitate the use of risk management for making operational decisions. The risk management function may also capitalise on its relationship with strategic decision-makers as ‘business partner[s]’ (Kaplan and Mikes, 2016, p. 13) and influence decision-makers (Hall et al., 2015). Recent findings have indicated that the role of the risk management function is to engage in ‘risk talk’ with stakeholders, which refers to the ‘organisational discourse about risk issues ranging from task-related problems and perceived organisational weakness to concerns about resource planning’ (Mikes, 2016, p. 255).

The subculture of the executive group comprises senior leaders who focus on the survival and growth of the organisation. The executive group pays particular attention to financial matters (Schein, 2010), even in the public sector. This characteristic is similar to that of the engineer/designer group in that leaders determine the formal values and rules that help to
manage the organisation as a whole. In addition, this group understands the necessity of having members in the organisation, although the focus is more on managing and controlling human resources.

The role of executives in the risk culture involves the approval of formal risk management rules and establishing ‘the tone at the top’ (The Institute of Internal Auditors, 2010, 2012). If the BUAs of the executive subculture support the use of risk management in making decisions, this may result in the establishment of espoused beliefs and values on risk management, which may be accepted by other members of the organisation. However, even if executives do not believe in the value of risk management in decision-making processes, an organisation may continue to hold espoused beliefs and values associated with risk management in decision-making because of their obligation to comply with public sector initiatives. In these cases, espoused beliefs and values may be developed to simply pay lip-service to requirements and public expectations. In these cases, developing espoused beliefs and values and artefacts that support the use of risk management in decision-making is unlikely to accomplish the intended purpose if members of the organisation ignore them because of conflicting messages from the executive level.

The operator subculture represents the staff who run the activities of an organisation. Schein (2010) describes the operators as ‘those employees who produce and sell the organisation’s products or services’. Members of this group perceive that they are key to organisational operations. In most cases, operators follow formal rules and values; however, they may deviate from formal processes if they understand how to complete tasks more efficiently or, at times, to undermine demands they perceive to be unreasonable. Hence, this subculture may develop a different set of BUAs to those of the engineer/design and executive subgroups, resulting in operators being a major source of incongruence within organisations. Because of this, Schein
(2010) argues that investigating how work is done by operators is crucial in examining an organisation’s culture.

In the context of risk culture, the operator subculture is the predominant group that employs risk management practices—this subculture may adopt the risk culture established by the risk management function and executives, or it may use risk management differently from that intended by organisational leaders.

A potential limitation of studies that have previously explored risk management stems from the siloed examination of specific subcultures, namely those of risk management functions and/or executives (Hall et al., 2015; Mikes 2009, 2011; Woods, 2009). Studying these subcultures does not necessarily provide a useful or comprehensive insight into the operationalisation of risk culture. Alvesson (2002, p. 172) warns that ‘a technical, practically oriented knowledge interest’ only serves managerial aspirations because this idea appeals to ‘fantasies of being in the elite, on being grandiose and omnipotent’. The exception is Jordan et al.’s (2013) study, which included participants from all groups and explored the holistic dynamics between organisational members and their influence on risk management practices in private sector organisations. Similarly, the study presented in this thesis includes both of the subcultures involved in risk management—the subculture comprising executives, senior management and risk experts (henceforth termed the ‘executive group’) and that comprising operators—to enhance the understanding of risk culture from different perspectives. It is important to include the views of the operator group to understand how risk culture is ‘operationalised’ (i.e. how risk culture is perceived and embedded) (Power et al., 2013, p. 76), to provide a holistic picture of organisations and to obtain insight into the BUAs of those who are ‘less powerful and marginalised’ (Martin, 2001, p. 10).
3.5.2 BUAs from the three perspectives—integration, differentiation and fragmentation—and the use of risk management

Subcultures in organisations are dynamic. For example, the espoused beliefs and values and the artefacts of risk management practices developed and implemented by risk management functions and approved by executives may or may not be used by operator groups. In other words, the risk management practices of different subcultures within organisations may be consistent or inconsistent. Martin (2001) views these dynamics from three perspectives: integration (consensus), differentiation (conflicts) and fragmentation (ambiguity).

The integration (consensus) perspective reflects the dominant manifestations of ‘a culture that have mutually consistent interpretations’ (Martin, 2001, p. 91). This perspective is congruent with Schein’s (2010) framework, which focuses on clear and consistent beliefs and values of organisational members and excludes those that are ambiguous or conflicting. Consensus between subcultures leads to clarity, consistency and strength of organisational values (Collins and Porras, 2002; Martin, 2001). According to Schein (2010), if the values and beliefs of the subcultures within an organisation are shared, conflicts can be reduced, and subcultures can collectively contribute to organisational goals. Collins and Porras (2002) found that strongly integrated subcultures help organisations succeed during growth and change because their shared values help members commit to the organisation and understand its core purpose. With consensus, it is expected that employees will be more motivated and committed to establishing and achieving goals (O’Reilly, Chatman and Caldwell, 1991; Denison and Neale, 1999) and that organisations will benefit from affiliation, group responsibility and achievement (Katz and Kahn, 1978). Therefore, organisations that have consensus of BUAs in their risk cultures are more likely to achieve their intended goals.
Prior literature on organisational culture suggests that integrated, strong cultures (i.e. consensus of BUAs) may be promoted by the efforts of senior management to establish and implement assumptions through official espoused beliefs and values (Ouchi, 1979; Wilkins and Ouchi, 1983; Kennedy and Deal, 2000). These values are communicated via formal and informal mechanisms to harmonise the assumptions of organisational members. Consensus of BUAs can be achieved only if organisational members agree that the management’s proposed intention is useful and provides solutions at the operational level (Schein, 2010).

Care should be taken to avoid the assumption that consensus of organisational values and beliefs equates to ‘a sharing of goals’ (Wilkins and Ouchi, 1983). Wilkins and Ouchi (1983) use the term ‘goal congruence’ (p. 471) to describe the tendency of organisational members to assume that they will be treated equitably. These authors suggest that members may share ‘general orientations’ (p. 471), but this does not necessarily equate to the sharing of specific knowledge or goals.

This thesis proposes that consensus of BUAs between the two subcultures can influence the use of risk management in certain ways. Without an integrated or strong risk culture, employees from different subcultures may not apply risk management consistently in decision-making (Farrell and Hoon, 2009). If an organisation has an integrated, strong risk culture that supports the usefulness of risk management and there is congruence between the BUAs of executive and operator groups, these shared values and attitudes may positively influence the use of risk management in decision-making. For example, the perceived usefulness of risk maps to manage risk may motivate use of the tool by organisational members involved in risk management and create a positive dynamic between members (Jordan et al., 2013).

To nurture an integrated, strong risk culture in an organisation, the attitudes of senior managers about risk management should be consistent and motivational since their BUAs send specific
messages to organisational members (Bank Governance Leadership *et al.*, 2014; Coetzee and Fourie, 2009; Spira and Page, 2003). For example, if executives possess the BUA that risk management is useful in decision-making, espoused beliefs and values and artefacts tend to reflect this assumption. Risk management functions can facilitate this process by developing and implementing espoused beliefs and values and artefacts associated with risk management that are in line with executives’ BUAs. Users of risk management in organisations may follow these established values and use artefacts proactively if they agree with the BUAs of executives.

In the risk culture research, contributions by practitioners and the public sector suggest that integration is important, but empirical evidence is lacking. Therefore, this thesis aims to investigate whether integration in the risk cultural environment influences risk management in the public sector.

In contrast to the integration perspective, the differentiation (conflict) perspective ‘focuses on cultural manifestations that have inconsistent interpretations’ (Martin, 2001, p. 94). The differentiation perspective considers the incongruency between the BUAs of organisational members as ‘inescapable and desirable’, implying that BUAs are only shared by members of a particular subculture. At the organisational level, the differentiation approach implies that subcultures are in conflict with each other. The fragmentation (ambiguity) approach takes a further step, interpreting cultural manifestations as ‘neither clearly consistent nor clearly inconsistent’ (Martin, 2001, p. 94). The fragmentation perspective implies that coherency of BUAs can change continually and can be specific to issues.

Differentiation/conflict and fragmentation/ambiguity in risk culture arises from the presence of different BUAs in an organisation. As discussed above, operators may have their own BUAs about risk management, which can be congruent with or divergent from the formal beliefs and values of the organisation and the BUAs of executives and/or risk management functions.
Studies from the risk management field have found that operator support of the espoused beliefs and values of executives and risk experts depends on the usefulness and relevance of these beliefs and values to operator roles and responsibilities (Mikes, 2009; Skaerbaek, 2010; Fischer and Ferlie, 2013). In the private sector, practitioner-led research has acknowledged the importance of operators’ thoughts and attitudes towards risk management since many problems arising in the past were thought to result from incongruency of members’ beliefs and attitudes (Protiviti and Institute of International, 2012).

Taking these three perspectives into account can provide a deeper insight into the dynamics of an organisation because consensus, conflict and ambiguity can help explain the extent of the alignment of organisational members’ BUAs. In particular, differentiation and fragmentation can explain how BUAs can affect the use of risk management in public sector organisations. In the risk culture context, the differentiation and fragmentation approaches are mostly noted in the academic research. For example, Hood (1996) asserts that risk management continues to occur in organisations with conflicting values, even though it was originally developed to achieve integrated, shared views between organisational members. Mikes (2012) is critical of the existing risk management research, stating that it has not adequately addressed ‘the complexity, incongruity [and] context-dependency’ (p. 19) of issues because it has focused only on integration and generic, entity-wide processes.

Ostensibly, these three perspectives appear to ‘oppose each other’ on three points: ‘the relationship among cultural manifestations, the orientation to consensus in a culture; and treatment of ambiguity’ (Martin, 2001, p. 120). However, as the three perspectives take different stances, Martin (2001) argues that these perspectives can perfectly complement each other.
In summary, this section has shown how risk cultures may be operationalised differently, that organisational members may demonstrate consensus, conflict or ambiguity/fragmentation of their BUAs about risk management, and that these BUAs may influence the use of risk management.

3.6 Cultural environments—the organisational culture literature and its application to risk culture

3.6.1 Risk cultural environments

The cultural environment may influence organisational members’ BUAs and their use of risk management because it motivates members to feel, think and behave in particular ways. Similar to Schein’s (2010) concept of ‘climate’, a cultural environment is a component of the artefacts of organisational culture. Schein (2010) notes that examining different types of cultural environments is helpful in comparing organisations with each other.

Because Schein (2010) did not conceptualise different types of cultural environments, this thesis adopts Cameron and Quinn’s (2010) typology, which identifies four types of cultural environments: collaborative, creative, controlling and competitive. To create these categories, Cameron and Quinn (2011) profiled organisational cultures using six dimensions: dominant characteristics, organisational glue, strategic emphases, criteria of success, leadership and management of employees. Dominant characteristics address the overall organisational behaviours and attitudes; ‘organisational glue’ refers to the underlying motivations that hold an organisation together; strategic emphases are the long-term aims, beliefs and values of the organisation; criteria of success represents the organisation’s definition of success; organisational leadership is the ability of leaders to guide the organisation; and management of
employees refers to the actions that employees are encouraged to undertake. From these six dimensions, four cultural environments have been derived (see Figure 3.1).

Figure 3.1 Four cultural environments

The collaborative culture, also known as the ‘clan culture’, is characterised by a friendly, family-like workplace. Employees behave like an extended family who share similar views. The dominant characteristics of this culture are the sharing and collaboration of behaviours and attitudes. Members are glued together by loyalty, mutual trust and/or tradition, resulting in a strong commitment to organisational goals. Strategic emphases include the long-term benefits of human resource development, cohesion and morale of employees. Success is defined in terms
of human resources, teamwork, employee commitments and concern for people. Thus, teamwork, participation and consensus are considered important values. Managers in this type of organisation function as mentors by facilitating and nurturing employee abilities.

The creative, or ‘adhocracy’, culture represents a dynamic, entrepreneurial and creative workplace. This cultural environment encourages innovation and product or service development. Organisational members are willing to take risks. The leaders themselves are innovators and risk-takers. The organisation operates through a commitment to experimentation and innovation while emphasising the ‘leading edge’. Its long-term goals are focused on growth and the acquisition of new resources. These organisations take on new endeavours and prospect for opportunities. Success is achieved through obtaining unique products or services; thus, product and service leaders are important. This cultural environment encourages individual initiative and freedom.

The competitive, or ‘market’, culture is results-oriented. The focus is on job completion, results and achievement-oriented behaviours and attitudes. Leaders of these organisations are driven, competitive, tough and demanding. The organisation is united by its commitment to achieve goals. Long-term goals are achieved through competitive activities and measurable goals and targets. Success is based on winning in the marketplace and outpacing the competition and employees are rewarded by management for their competitiveness and level of accomplishment.

Finally, the controlling culture, also known as the ‘hierarchy culture’, is a formalised and structured workplace with an emphasis on formal rules and policies. Organisations are governed by procedures, and leaders are effective coordinators and organisers. Organisations with this culture focus on efficiency, control and smoothness of operations. Organisational members together are bound by formal rules and policies. Long-term goals are focused on stability and performance. Success is defined in terms of dependable delivery, efficient scheduling and
reduced costs. Employees are motivated by secure employment, conformity, stability and predictability.

Despite their distinctive characteristics, these four cultural types are not necessarily exclusive—different cultural environments may coexist within organisations. For example, an organisation may have a strong collaborative culture, a moderate creative culture and weak competitive and controlling cultures. Cameron and Quinn (2011) illustrate this by showing that government agencies in the USA typically value efficiency and reliability, while the Australian public sector tends to value outcome-based reward systems, collaboration and networking (Victoria State Services Authority, 2013), accordingly to its official statements. These organisations are mostly characterised by aspects of the controlling culture but also show characteristics of the collaborative and competitive cultural environments.

To illustrate how this framework has been adopted in the public sector context, Parker and Bradley (2000) profiled Australian public sector organisations that had experienced the influence of the new public management approach. Since the rationale of new public management in the public sector was to enhance ‘flexibility and responsiveness of public sector organisations’ (Parker and Bradley, 2000, p. 131), the authors expected that public sector organisations would exhibit certain values associated with the post-bureaucratic characteristics of flexibility, adaptability and performance management. Following their survey of six organisations, the authors found that all participating organisations had a combination of the four cultural environments. However, the public sector still had a strong traditional controlling environment, even after adoption of the changes required by the Australian new public management approach, which emphasised goal-oriented values. Only two organisations presented slightly stronger attributes of the competitive culture that emphasised goals and results. All organisations were observed to have weak creative and collaborative attributes compared with the other two cultural environments.
This thesis adapts Cameron and Quinn’s (2011) framework to the risk cultural context and categorises risk cultural environments into four types: collaborative, innovative, goal-oriented and controlling (see Table 3.2). The characteristics of risk culture are adapted from Cameron and Quinn’s (2011) six dimensions of cultural environments: Dominant Characteristics; Organisational Leadership; Management of Employees; Organisational Glue; Strategic Emphases; and Criteria of Success. These adapted characteristics will form part of the initial stage of research for this thesis.
Table 3.2 Application of the four organisation cultural environments to risk culture

<table>
<thead>
<tr>
<th>Type of Risk Culture</th>
<th>Dominant Characteristics</th>
<th>Leadership</th>
<th>Management of Employees</th>
<th>Organisational Glue</th>
<th>Strategic Emphases</th>
<th>Criteria of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative</td>
<td>Sharing risk information and participative, interactive risk management practices.</td>
<td>Guidance, mentoring, facilitation and support.</td>
<td>Risk management through teamwork and participation.</td>
<td>Risk management by loyalty, mutual trust and participation.</td>
<td>Risk management focuses on organisational members’ skills and knowledge in managing risks.</td>
<td>Risk management is considered successful based on the development of human resources, teamwork, employee commitments and concerns for people.</td>
</tr>
<tr>
<td>Innovative</td>
<td>Dynamic and entrepreneurial risk management practices. Risk-taking organisational behaviour.</td>
<td>Entrepreneurship, innovation and risk-taking.</td>
<td>Risk management through individual risk-taking, innovation, freedom and uniqueness.</td>
<td>Commitment to innovation and development in risk management.</td>
<td>Risk management focuses on new resources, new challenges and prospecting for opportunities.</td>
<td>Risk management is considered successful based on unique or new services or processes.</td>
</tr>
<tr>
<td>Goal-oriented</td>
<td>Competitive and results-oriented risk management practices.</td>
<td>Results-oriented risk management practices.</td>
<td>Risk management through competitiveness, high demands and achievement.</td>
<td>Risk management for commitment to achievement and goal accomplishment.</td>
<td>Risk management focuses on meeting stretchable targets.</td>
<td>Risk management is considered successful based on improved performance against targets and competitive results.</td>
</tr>
<tr>
<td>Controlling</td>
<td>Governed by formal rule-oriented risk management practices.</td>
<td>Coordinating, organising, smooth-running efficiency.</td>
<td>Risk management through security of employment, conformity to rules and policies, predictability and stability in relationships.</td>
<td>Risk management by formal rules and policies.</td>
<td>Risk management focuses on permanence and stability in operations.</td>
<td>Risk management is considered successful based on efficiency and dependable delivery in performing one’s tasks.</td>
</tr>
</tbody>
</table>

Source: adapted from Cameron and Quinn’s (2011) framework of organisational culture
A collaborative risk culture can be interpreted as one that focuses on participation, interaction and teamwork in risk management. This type of risk culture values the sharing of risk information and collaborating on tasks. Risks can be openly discussed between members of the organisation, and risk management processes, such as meetings on risk management, are participative, supportive and interactive.

An innovative risk culture is one characterised by innovation. Organisational members are encouraged to take risks and pursue new and improved ways of doing things. In the case of public sector organisations, which tend to have more of a controlling risk culture, characteristics of the innovative risk culture may help drive the integration of risk management into decision-making for creation of opportunities, which may help avoid the typically risk-averse nature of these organisations (ANAO 2014b).

A goal-oriented risk culture is one that values performance and outcomes and establishes effective ‘stretch goals’. This type of risk culture may motivate organisational members to improve the use of risk management in decision-making to accomplish goals and achieve more effective outcomes.

A controlling risk culture encompasses the attributes of formality, conformity and dependability. Studies show that the public sector organisations tend to exhibit the dominant characteristics of the controlling culture (Matthews, 2009; Parker and Bradley, 2000). This type of risk culture may encourage members to make decisions that support safe courses of action to achieve stability and reliability of public service delivery. This risk culture puts its strategic emphases on controls, conformance, rules and regulations.

These four risk cultural environments may influence organisational members’ BUAs and their use of risk management. In the next section, the influence of these environments is discussed.
3.6.2 The influence of the risk cultural environment on members’ BUAs and their use of risk management

A collaborative cultural environment, which supports participation and interaction, may help in the achievement of intended goals (Cameron and Quinn, 2011; O’Reilly et al., 1991). According to Kilmann et al. (1985), a supportive environment helps organisational members to support each other’s efforts in problem-solving because they have a shared enthusiasm for achieving common goals. Cameron and Quinn (2011) note that greater participation and involvement nurtures empowerment, commitment and satisfaction among employees, which can lead to better outcomes for shared goals. In addition, these characteristics are strongly associated with more engagement in decision-making by organisational members because participation and support by team members enhances information flow, which can lead to the sharing of relevant information and intended goals (Dharmayanti et al., 2012; O’Reilly et al., 1991; Smith and McCloskey, 1998).

This thesis argues that there is a similar dynamic in the context of a collaborative risk cultural environment—the characteristics of the collaborative risk cultural environment, including support, participation, interaction, openness and sharing of risk information, may help to shape members’ BUAs positively with respect to the usefulness of risk management in decision-making and may, in turn, enhance the use of risk management in decision-making. A collaborative risk cultural environment may also directly enable the use of risk management in decision-making. If an organisation has a supportive risk cultural environment, organisational members are more likely to support the executive’s BUAs about the usefulness of risk management because they are more empowered to share their enthusiasm about and commitment to risk management with other members (Caldarelli et al., 2016). In addition, information about various risks, including both opportunities and threats, is shared more readily
when there is an unobstructed flow between the upper and lower levels of the organisation (Caldarelli et al., 2016). Sharing risk knowledge is thought to be effective in risk management (CPA Australia, 2011). Additionally, if members, particularly operators, have the opportunity to observe executives taking risk management seriously, they are more likely to use risk management themselves in decision-making because of the effect of role modelling.

An innovative cultural environment may facilitate the use of risk management for exploring opportunities. Kanter (1983) and Kotter (1990) claim that this kind of cultural environment helps organisations to identify and manage new opportunities because members tend to be receptive to innovation. If senior managers disseminate their BUAs about innovative solutions throughout the organisation, members are more likely to accept these assumptions. Hence, this thesis argues that members of an innovative cultural environment are not resistant to new ways of doing things as they are more receptive to the ideas of other members. Therefore, an innovative risk cultural environment stimulates organisational members to think of new ways of undertaking tasks by clearly identifying the risks and their associated strategies, rather than subconsciously avoiding risks.

Despite the benefits of the innovative culture, without the balance of other cultures, it could potentially encourage organisational members to take risks in decision-making without any kind of risk management strategy. Examples of these incidents have been well documented in the financial sector—the global financial crisis, for example, was partially caused by financial organisations taking risks without appropriate risk management processes (Power et al., 2013).

A goal-oriented environment may facilitate risk management in decision-making aimed at achieving outcomes. Cameron and Quinn (2011) argue that goal-oriented cultural environments tend to form in response to the need for organisational effectiveness. In this type of environment,
organisational members may use a particular tool or techniques to make decisions more effectively.

In the context of risk culture, a goal-oriented environment helps members focus on achieving goals effectively by considering a wide range of risks as well as the options to manage them. Drennan and McConnell (2007) argue that government agencies have an increased awareness of the importance of risk management in achieving stretch targets and enhancing performance in the process of business operations and decision-making. In this respect, a goal-oriented risk cultural environment is likely to foster favourable BUAs towards the usefulness of risk management in decision-making, in turn enhancing the use of risk management.

A controlling risk cultural environment may create ambivalence in organisational members’ BUAs and their use of risk management. For example, it may result in organisational members behaving in ways that conform to accountability and consistency while depriving them of decision-making opportunities. Characteristics of the controlling cultural environment, such as rules, controls, conformity, formalisation, stability, predictability and dependable delivery, may help protect organisations from making reckless, excessively risky decisions, and enable them to develop coordination and stability (Cameron and Quinn, 2011). Members are given clear expectations and guidance on how the organisation should run, tasks are efficiently coordinated (Cameron and Quinn, 2011) and organisational members can focus on processes that comply with laws, regulations and accountability (Parker and Bradley, 2000). The combination of an innovative risk culture and a controlling risk culture may be helpful in achieving a balance between risk avoidance and risk-taking activities.

A contrasting view is that from Kotter and Heskett (2011), who argue that a controlling culture may create an environment in which information is not shared quickly or easily. In addition, a greater emphasis on controls may reduce organisational members’ motivation and passion,
potentially making them ‘reactive, risk averse and not very creative’ in their decision-making (Kotter and Heskket, 2011, p. 44). In the risk management context, a strong controlling cultural environment, which emphasises authority, rules, monitoring of activities and negative reinforcements, may lead organisational members to believe that risk management is legislated (Arena et al., 2010; Power et al., 2013). Building on this concept, it is anticipated that public sector organisations with controlling risk cultural attributes are less likely to select risk management activities that relate to creating new challenges and opportunities and more likely to use risk management as a box-ticking exercise if it is required by formal rules and authorities. This may result from members being unable to share organisational values and beliefs because of a lack of information or incorrect information. In addition, in a rigidly controlled, rule-based, process-driven culture, even though its members may believe that risk management is useful in decision-making, they may never have the opportunity to implement their own BUAs since they are expected to follow defined processes rather than use their own judgement in decision-making. In accordance with previous organisational cultural studies (Cooke and Szumal, 2000), this cultural environment may not encourage risk management in decision-making.

In summary, this section outlined Cameron and Quinn’s (2011) typology of organisational cultural environments, which was then adapted to the risk cultural context. It also discussed the ways in which risk cultural environments could influence organisational members’ BUAs and their use of risk management in decision-making. In the next section, the formal and informal risk management mechanisms are explored.
3.7 Risk management mechanisms

3.7.1 Formal and informal risk management mechanisms

Protiviti (2014) argues that it is important to detect and implement mechanisms to change the risk culture of organisations. However, the research on mechanisms that may be effective in changing risk culture is limited (Protiviti and Institute of International, 2012). This section discusses two categories of mechanisms, formal and informal, in the context of risk culture and risk management.

Formal mechanisms are described as systematic and standard systems such as rules and standard operating procedures (Langfield-Smith, 1997; Chenhall, 2003). Examples of formal mechanisms in the organisational culture context include formal reward and discipline systems, reporting structures, rights and rules with respect to decision-making, policies and procedures, control and monitoring processes, official communications from management, and training and organisational development programs (Schein, 2010; Cameron and Quinn, 2011; Katzenbach et al., 2012; Kotter and Heskett, 2011).

Formal mechanisms may facilitate consensus of BUAs between different subcultures. Formal policies, rules and procedures may help organisational members to understand and share the attitudes and assumptions of senior management on particular issues (Schein, 2010). Formal mechanisms in the context of risk culture may involve ‘three lines of defence’, oversight of the business unit, risk management functions and internal audit functions to provide ‘a simple and effective way to enhance communications on risk management and control by clarifying essential roles and duties’ (The Institute of Internal Auditors 2013, p. 2), risk appetite (De Jonghe et al., 2013; Power, 2009); and the use of risk calculation methods, such as value-at-risk software, risk-adjusted capital models, risk visualisation tools such as risk matrices and

Informal mechanisms are informal systems that are responsive and flexible with fewer rules and processes (Chenhall, 2003). Examples of these include role modelling of behaviours by leaders, informal channels of rewards and sanctions, manager–employee relationships and communications, tacit knowledge, learning processes, feedback, networking, ad hoc gatherings, interactions and storytelling between organisational members, facilitation by exemplars and motivational leaders, and perceived obligations between executives and other organisational members (Argote, 1999; Katzenbach et al., 2012; Kober et al., 2007; Kotter and Heskett, 2011).

In the context of risk management, examples of informal mechanisms may include risk champions, informal discussion about risks and sharing stories about risk management successes and failures (McPhee, 2002; Bank Governance Leadership et al., 2014).

The next section discusses the ways in which formal and informal risk mechanisms may influence organisational members’ BUAs and their use of risk management.

3.7.2 The influence of risk mechanisms on members’ BUAs and their use of risk management in decision-making

Formal mechanisms are generally aimed at achieving intended administrative, personnel or behavioural outcomes (Langfield-Smith, 1997). A number of studies have examined various formal mechanisms used to shape organisational culture (Katzenbach et al., 2012; Schein, 2010). Formal mechanisms signal and reinforce an organisation’s core values and principles and its commitment to members. In the risk management context, the development and implementation of formal mechanisms, such as operational processes, can help to facilitate a consistent understanding of risk and risk management within the organisation (Hoon, 2009).
Establishing formal incentive and reward systems and having ongoing, effective formal communication also facilitates sound risk cultures (Farrell and Hoon, 2009; IRM, 2012; Bank Governance Leadership et al., 2014). This is because they explicitly state their preferred risk management mechanisms by developing organisational norms and commitments and rewarding attitudes and behaviours that conform to them (PwC, 2014). Hence, formal risk management mechanisms may facilitate consensus of BUAs, which not only helps organisational members make risk-based decisions, but also motivates them to adopt decision-making behaviours that are congruent with those of the overall organisational risk culture.

Studies have also explored how informal mechanisms influence organisational cultures. For example, informal mechanisms may be effective in developing and shaping organisational cultures by promoting preferred attitudes, values and beliefs to organisational members (Ouchi, 1979). Through informal mechanisms, organisational members gain a better understanding of the underlying thoughts and attitudes of leaders and other members, which may help members to internalise them (Ouchi, 1979; Katzenbach et al., 2012). A.T.Kearney (2011) also notes that changes made through and supported by informal mechanisms facilitate the greater integration of assumptions and attitudes of operational members and executives. Although formal mechanisms may be developed with the best intentions, organisational members may interpret these mechanisms differently to what was intended. The support of informal mechanisms, such as informal networks, can increase the effectiveness of delivering consistent messages, fostering trust and embedding desired values, and may help members consider the usefulness of risk management in decision-making.

Research has also found that informal leaders can become key influencers in the organisation and bring about desired changes in the motivations of organisational members more effectively (Katzenbach et al., 2012). Similarly, Farrell and Hoon (2009) found that aligning senior management with middle management, which can be included in the operator subculture, is
important because middle managers are potentially direct users of risk management in their decision-making. These middle management operators may help establish the norm for other operators such as team members.

The attitudes and behaviours of leadership with respect to risk management should ideally become the organisational norm to establish congruent risk cultures at all levels of an organisation (Bank Governance Leadership et al., 2014). Having ‘consistent role modelling’ from organisational leaders is helpful because organisational members will have a greater opportunity to understand, share and implement leaders’ values and beliefs in their everyday activities (Protiviti, 2014, p. 2). In other words, organisational members’ perception and behaviours can be shaped according to the desires and expectations established by organisational norms (PWC, 2014). Indeed, a consistent understanding and application of education and leadership from senior management may optimise the use of risk management in the public sector (McPhee, 2002).

Both formal and informal mechanisms can influence organisational members’ BUAs and may be used to facilitate risk-based decision-making. However, it has been found that the messages conveyed by formal mechanisms are often inconsistent with those conveyed by informal mechanisms (Martin and Siehl, 1983; van Mannen, 1986). In the context of an organisational culture, it is considered important to align formal and informal mechanisms to achieve desired outcomes (Katzenbach et al., 2012) and send consistent messages (A.T.Kearney, 2011). In addition, the effectiveness of formal mechanisms can be negatively affected by informal mechanisms (Otley, 1980). According to Katzenbach et al. (2012), an effective way to make cultural change in an organisation is to integrate its formal and informal approaches. This integration enhances the congruency of BUAs because consistent messages arising from informal interactions may become more deeply embedded in the psyche of organisation
members, while formal incentives may stimulate the interest of organisation members; together, they may improve the commitment of organisation members to organisational goals.

Deloitte (2012) discusses the combination of formal and informal mechanisms and their usefulness in risk cultures. These combined mechanisms include behavioural and ethical expectations, formal rules and protocols, risk competence of organisational members, systems that motivate organisational members to act in intended ways, relationships within an organisation, leadership commitment, interactive communications, measurement and reporting and cultural change management. The Institute of Risk Management (2012) also discusses the importance of having both formal and informal mechanisms to develop a sound risk culture, with recommendations for boards and managers to provide clear support and direction, to be transparent and timely with sharing information, to establish positions and provide resources for risk experts, and to establish reward and performance management systems that adequately motivate organisational members.

Despite the importance of having both formal and informal mechanisms, organisations often favour and focus on establishing formal mechanisms, while underestimating the value of informal mechanisms (Katzenbach et al., 2012). The development of risk management practices usually starts with establishing frameworks, rules and processes. However, it is argued that formal mechanisms alone may not be sufficient to shape organisational decision-making effectively (Protiviti and Institute of International, 2012) because embedding the desired culture into an organisation requires establishing trust and communicating information through informal dialogue and collaboration. Deloitte's (2014) found that organisational trust in and support for organisational members, in addition to the risk management framework, were important factors in building the desired risk culture. It has also been noted that informal mechanisms can help share consistent values and attitudes towards risk management between all levels of an organisation (Bank Governance Leadership et al., 2014; PWC, 2014).
The impact of informal approaches may have been previously overlooked in public sector organisations in which bureaucratic formal mechanisms have been emphasised and well developed. However, government entities have recently acknowledged the importance of informal mechanisms and promote such mechanisms to complement the formal approach. For public sector organisations, informal mechanisms can induce participative and interactive conversations associated with risk in day-to-day decision-making (VMIA, 2015) and help to foster a consistent understanding and application of risk culture (McKinsey and Company, 2011).

In summary, this section discussed the findings from the literature on formal and informal risk management mechanisms and examined how these mechanisms may influence organisational members’ BUAs about the usefulness of risk management and their use of risk management in decision-making.

### 3.8 Summary of Chapter 3

This chapter discussed the analytical framework used for examining the research question. This framework integrates the concepts of the integrated, differentiated and fragmented BUAs, risk cultural environments and risk management mechanisms with the use of risk management. Examining the concept of risk culture through members BUAs, espoused beliefs and values and artefacts can help in understanding how risk cultures are developed in the public sector. The integration, differentiation and fragmentation perspectives may facilitate an understanding of congruence, conflict and ambiguity in members’ BUAs and shed light on how these factors may influence members’ use of risk management in decision-making. Risk cultural environments and risk management mechanisms were also investigated to identify how they
may shape BUAs and the use of risk management. The next chapter discusses the research methods adopted to examine the research question.
Chapter 4: Research methods

4.1 Introduction

This chapter discusses the research methods used to address the research question of “How does risk culture influence the use of risk management in decision-making in the public sector?”.

Section 4.2 explains the research approach and the rationale for the selection of mixed research methods. Section 4.3 discusses data collection and analysis of the Stage 1 interviews and Section 4.4 discusses the Stage 2 case studies. Sections 4.3 and 4.4 include a rationale for the selection of research sites and participants and the process used to obtain access to the research sites and participants. Finally, ethical considerations and methodological limitations are discussed in Sections 4.5 and 4.6, respectively, followed by a summary in Section 4.7.

4.2 A two-stage approach and mixed research methods

This thesis adopted a two-stage approach and mixed research methods to explore the research question. A two-stage approach is taken to verify and finetune whether the analytical framework based on organisational theories can explain risk cultures in the context of government agencies in Stage 1, prior to collecting more extensive data on risk culture and risk management in the public sector in Stage 2. As the analytical framework from Schein (2010) and Martin (2001) suggests obtaining research data from organisational members from different levels to have general understanding of organisational culture, this study incorporates mixed research methods of interviews and questionnaire survey to cover depth and breadth of culture by using participants across different levels of an organisation. In this way, the thesis attempts to get a clear understanding of risk culture across an organisation and its potential influence on the use of risk management in decision-making.
Stage 1 involved interviews with public sector managers and operators and reviews of documents with the aim of exploring the concept of risk cultures in the public sector, how risk cultures are operationalised and the reasons for the use of risk management. Stage 1 was also aimed at refining the analytical framework for this study. Stage 2 involved three case study organisations, which were explored using questionnaire surveys, document reviews and interviews. The aims of Stage 2 were to examine the differences between members’ BUAs regarding the usefulness of risk management and the extent to which they used risk management, and to analyse how risk cultural environments and risk management mechanisms influenced members’ BUAs and their use of risk management in each of the public sector organisations selected. Figure 4.1 summarises the overall research methods adopted. Table 4.1 provides an overview of the data collected from both stages.

Figure 4.1 Summary of research stages
Table 4.1 Summary of the data collected

<table>
<thead>
<tr>
<th>Stage</th>
<th>Stage 1</th>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation</td>
<td>Alpha</td>
<td>Beta</td>
</tr>
<tr>
<td>No. interviews conducted</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>No. questionnaire responses received</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>No. formal documents reviewed</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>No. informal documents reviewed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

By using a two-stage approach, data could be collected and comprehensively analysed by combining qualitative and quantitative methods to provide ‘thick descriptions’ (Geertz 1973, p. 25-26) of the findings from Stage 1. Thick descriptions were used to provide a description of cultural phenomena and the meanings that organisational members attribute to their attitudes, behaviours, words and objects, providing not only a rationale for addressing organisational members’ BUAs, but also a meaningful and complex context. This method provides a richly detailed and multilayered description that allows individuals who are not part of organisational cultures to make sense of the phenomena (Martin 2001, p. 268). By adopting the staged approach, this study takes into consideration the exploratory potentials of the research and ensures that the researcher’s observation is not idiosyncratic, and that the analytical framework is refined and robust.

Mixed research methods were adopted in both stages of data collection and analysis. Prior research in the area of organisational culture has shown that researchers can appropriately decipher organisational cultures to understand BUAs, espoused beliefs and values and artefacts. Schein (2010) argues that researchers can best understand cultures from an interactive
perspective, implying that, if data are obtained from document reviews, it is good practice to use interviews to explore whether organisational members’ behaviours are consistent with organisational policies and to identify the BUAs that may drive these behaviours.

The benefits of the mixed method approach are acknowledged in a number of studies (Grafton et al. 2011; Martin 2001; Schein 2010; Yin 2009). Following Schein’s (2010) suggestions, the research question in this study examines ‘process’ (how) and ‘outcome’ (the influence of risk culture on the use of risk management) (Grafton et al. 2011, p. 12). Mixed methods in case studies can provide more holistic data (Yin 2009) and insights that cannot be drawn from a single research method (Grafton et al. 2011). Therefore, the use of the mixed methods approach is considered appropriate for this study.

The use of multiple sources of evidence also helps ensure the validity of the analysis through corroboration or triangulation (Denzin, 1978). To ensure corroboration in this study, a ‘between-methods’ approach was adopted for the case studies. Mixed method triangulation is categorised as a type of between-methods approach, meaning that it encompasses the use of both quantitative and qualitative methods, rather than using multiple quantitative or multiple qualitative methods (i.e. a ‘within-method’ approach) (Grafton et al., 2011, p. 7). The between-methods approach was selected to strengthen the validity of the data since quantitative and qualitative methods can complement each other and minimise each other’s inherent weaknesses (Denzin, 1978).

In the following sections, research design, data collection and data analysis of Stages 1 and 2 are discussed in detail.
4.3 Stage 1—Interviews and document analysis

4.3.1 Overview of the research design

The objectives of Stage 1 were to explore risk cultures in the public sector and to conduct a preliminary investigation into how risk cultures may influence the use of risk management. In addition, this stage provided an insight into refinements needed for the analytical framework discussed in Chapter 3, as well as providing input for developing the questionnaire and interview questions for the Stage 2 case studies.

In Stage 1, document reviews provided the necessary background and context to enrich discussions and identify gaps to be investigated during interviews. For example, understanding the espoused beliefs and values and artefacts through document reviews prior to the interviews helped to then identify any inconsistencies between these and members’ BUAs. Schein (2010) suggests that researchers can appropriately study an organisational culture by identifying artefacts and processes that are interesting and puzzling and questioning how espoused beliefs and values are implemented in an organisation. He also suggests that the researcher must have conversations with organisational members to interpret the espoused beliefs and values and artefacts identified in the document review. Therefore, interviews and document reviews complemented each other in answering the research question in Stage 1.

4.3.2 Data collection—sample organisations and data source

4.3.2.1 Sample organisations

With the introduction of the *Public Governance, Performance and Accountability Act* in July 2013, the Commonwealth Risk Management Policy was developed by the Department of Finance in 2014 in an effort to provide risk management guidance, in the form of nine principles,
to government agencies. For the purpose of this thesis, public sector entities governed by this policy were selected to explore how risk cultures were developed under this approach.

The study aimed to examine a minimum of four organisations in the public sector, regardless of their BUAs, risk cultural environments or risk management mechanisms. To select samples, the 2015 Australian Government Organisations Register was downloaded from the Department of Finance webpage. From this register, 22 of 1,193 government organisations were initially selected on the basis of organisational size (Average Staffing Level greater than 100) and exposure to risks (entities having high media exposure, entities involved in risky operations as identified in government audit reports and publications). The size of participating organisations is required to be at the reasonable level so that interviews from different levels should be available. Among these organisations, small material entities⁴ and public sector regulators were removed, leaving 13 Australian government organisations. Prior to sending out invitation letters, organisation websites were searched for annual reports and risk management values and practices to identify any observable variations in risk cultures and use of risk management.

One of the challenges of Stage 1 was accessing a minimum of four government organisations for the collection of qualitative data since the Australian public sector places a high priority on confidentiality of information about preventable risks, such as security risks. Despite these challenges, the research question was of interest to the public sector, resulting in a reasonable level of participation. Thirteen invitation letters were posted to the selected government entities, with four entities expressing a willingness to participate in the research. The prompt responses to the invitations showed the interest of these organisations in the research topic.

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⁴ Material entities are defined by the Department of Finance (2015) as government agencies whose total income, expenses, assets and liabilities falls within the top 99% of the total general government sector. Exceptions apply to entities that are considered material in nature, such as departments of state.
As requested, each of the four government entities provided access to participants from different subcultures, including executives, operators and risk management officers. Examining the assumptions and attitudes of different subcultures, particularly from the perspectives of integration, differentiation and fragmentation, was important to reveal the depth and richness of the research topic (DiCicco-Bloom and Crabtree, 2006). Each organisation nominated three to six members involved in risk management practices for the interviews. As a result, a total of 18 interviews involving 20 participants from four public sector organisations were conducted.

The process of obtaining access to organisations was tedious since the endorsement and approval processes according to each organisation’s policies had to be followed. After initial approval from the heads of the respective government entities, delegates from each entity recruited internal participants and provided the researcher with a list of potential interviewees and schedules. The coordination of this took longer than expected because of the seniority and tight schedules of some participants. All interviews were undertaken at the participating organisations in rooms arranged by the delegates.

4.3.2.2 Interviews and construction of interview questions

Interviews are typically used to gain an in-depth understanding of the topic under study (Patton, 2002). Interviews allow researchers to examine issues that cannot be easily observed or measured (Patton, 2002); therefore, this has been a preferred method used in accounting research to examine people’s thoughts, attitudes and values (Mahama & Khalifa, 2017). Since the purpose of this study was to examine the assumptions, beliefs and attitudes of organisational members towards risk management, the interview method is appropriate to collect participants’ opinions, experiences and beliefs. It has also been noted that interviews are beneficial for topics in which there are few prior studies, because they can gather in-depth data on a topic (Gill et al., 2008). From an organisational culture perspective, Schein (2010) highlights the importance of
substantial analysis derived from in-depth, qualitative data when researchers study organisational cultures. Therefore, to gain a deeper understanding of risk culture in organisations, Stage 1 involved semi-structured interviews with both executives and operators to identify their BUAs in relation to risk management.

Yin (2009) suggests that in-depth insights from interviews can be obtained by asking integral, open-ended, non-threatening questions that allow participants to remain open and honest. The interview also creates a good opportunity to ask ‘how’ and ‘why’ questions. The data from interviews may be used to corroborate data from other sources—in this study, these include the questionnaire responses and documents reviews.

Face-to-face semi-structured interviews were conducted. Accounting research has shown that semi-structured interviews are particularly effective when researchers wish to extract contextual in-depth stories while simultaneously maintaining focus and flexibility (DiCicco-Bloom and Crabtree, 2006; Mahama and Khalifa, 2017). Thus, it was appropriate for this study to adopt a flexible interview structure for interviews with government officials involved in risk management activities. The interview questions were constructed from public documents and literature in the public sector with the research question in mind. The questions reflected the most important and contemporary issues related to this research. Pilot interviews with two risk management professionals were undertaken to help with preparation of the interview questions. The set of prepared questions was used as a guide for the researcher and the interviewees, but flexibility allowed modification of the questions to obtain a deeper understanding of the topic.

Specifically, interviewees were asked to provide their views on the following topics: their use of risk management and their organisational risk management practices; their BUAs regarding the usefulness of risk management; what they see and hear about risk management and about other members in their organisation; and their organisations’ risk cultural environments and
adopted risk mechanisms and the effectiveness of these risk mechanisms. Background and demographic questions were also included to assist in the classification of interviewees into executive or operator groups. A list of the interview questions is provided in Appendix 1.

As the study’s aim was to understand risk culture from the perspective of organisational members, it was important to gain insight into what the members considered to be their risk culture. Prompt or probe questions were prepared in advance in case additional information was required. At the start of each interview, the research project was described and a brief overview of the study’s objectives was provided. After the introduction, a signed consent form was collected and any questions about the research were addressed. During the interview, the researcher listened attentively and occasionally rephrased key statements provided by the interviewees to instil confidence in the interviewees. These techniques are recommended to build trust and rapport between the researcher and interviewees to facilitate participant honesty (Mahama and Khalifa, 2017).

Interview data consisted of verbal responses, which were documented in both notes and audio recordings. One of the 20 interviewees did not give permission for the researcher to record the interview, so only notes were taken in this case. During the interview, the researcher also noted non-verbal expressions such as body language and tone, which were incorporated into the interview transcriptions. The documents used by participants to explain risk culture and risk management practices were collected. Following each interview, the thoughts and observations of the researcher were recorded in memos to optimise analysis of the interview data.

4.3.2.3 Document review

Both stages of the study incorporated a document review. In Stage 1, the researcher analysed a total of 10 internal and publicly available documents for each organisation, including portfolio budget statements, corporate plans, annual reports, customer service charters, self-assessment
forms, risk management frameworks, risk management templates, internal reviews of risk maps, risk matrices and associated assessments, and the organisation’s aspirational values with respect to risk management and risk culture. The researcher was permitted to examine certain internal documents onsite only and the review of these documents was recorded in case study notes separately. External documents were reviewed prior to the interviews to obtain a better understanding of the organisation’s, while internal documents were reviewed and used to supplement the interview findings where appropriate.

Document reviews are helpful in identifying key themes and associated issues in a selected research topic (Bowen, 2009). This study adopted a document review for both stages because the documents provided preliminary information about each organisation’s risk management practices. Examining the espoused beliefs and values and artefacts in the government documents provided an overview of the organisational risk culture. Individual corporate or internal documents can show the observable current and aspirational risk practices of an organisation and its historical or planned activities on risk management, enabling the researcher to connect them to members’ BUAs. Further, certain internal documents, both formal and informal, such as risk management frameworks and functional risk heat maps, indicate how members think about risk management and how risk management is used by the members of different groups for various purposes.

4.3.3 Data analysis

4.3.3.1 Profile of interviewees

Eighteen interviews were conducted with 20 participants from four public sector organisations. Participants included 10 executives and members of risk management functions and 10 operators of risk management. A list of participants is provided in Appendix 2. The executive
group\textsuperscript{5} was defined as comprising the individuals who make strategic decisions for the organisation and/or approve the risk management framework in the organisation, as well as those who design and implement risk management frameworks and/or provide risk management advice and support in the organisation. Users of risk management practices, other than those in the executive group, were the operators. Executive groups tend to make decisions at the strategic level, while operator groups make decisions associated with operational tasks. The interviews were undertaken between June and September of 2015. The participants all commented that they had been involved in and were aware of risk management formally or informally during their career, which ranged from a year (in the case of graduate operators) to decades (in the case of executives).

Depending on the maturity of the risk management practices in the organisation and the level of knowledge of individual participants, the duration of interviews varied from 44 to 66 minutes. Where participants were actively involved in the development, implementation and use of formal risk management practices, the interviews tended to last for longer because of the greater complexity of responses. Interviews with members of the executive group were more in-depth since they were able to provide an overview of their organisation’s risk management framework.

4.3.3.2 Interview and document data analysis

During the transcription process, each interview was assigned a unique identifier made up of the subculture group to which the interviewee belonged and an organisational pseudonym (Alpha, Beta, Gamma or Delta). The transcription was conducted by the researcher and was randomly reviewed by the researcher’s supervisors at its completion.

\footnotesize{\textsuperscript{5} For the purpose of this analysis, the executive group included both members of senior management and risk management function. This was to maintain confidentiality of the identity of risk experts from risk management function given the limited number being interviewed. The combination may also be justified because of the similarities in the beliefs towards risk management as found in the study.}
With respect to the interview data, the analytical framework established coding categories, which encompassed the concepts of risk culture, risk cultural environments, risk management mechanisms and the use of risk management. Emerging codes from the interview data were used to update the analytical framework and help construct the questions for Stage 2.

For both the interview and document analysis, NVivo 10 was used to categorise the data by conceptual codes and analyse their relationships and patterns. The researcher took two criteria into consideration to achieve high-quality data analysis for Stage 1: first, coherence and consistency in the analysis to provide a better understanding of the research topic (Mahama and Khalifa, 2017, p. 24) and second, ensuring the analysis was supported by existing literature (Patton, 2002).

Analysis of the interview and document data involved the four-step inductive approach developed by Mahama and Khalifa (2017, pp. 19-23). The first step in this approach involves a preliminary analysis to obtain an overview of the data. In this step, the researcher reads the interview data multiple times to develop a general understanding while making notes about the raw data. For this study, this process was helpful in identifying emerging themes and important topics from the document analysis and interview data.

The second step involves organising the data through coding and categorising. Following the brief examination of the data in the first step, the raw data were categorised based on similar themes, such as members’ BUAs with respect to their risk culture. The codes were developed either from the theoretical framework and literature review or from emerging themes identified during the first step. Code types may include conceptual codes, relationship codes, participant views, participant characteristics and setting codes (Bradley et al., 2007, p. 1763). Following coding, data were categorised by coherent themes to reveal patterns, as suggested by Mahama and Khalifa (2017).
The third step involved identifying relationships and developing patterns from the interview analysis. For example, the interactions of BUAs were examined to determine whether the integration perspective was present in the selected organisation. Identifying relationships and patterns can reveal irregularities and exceptions simultaneously. Therefore, the differentiation and fragmentation perspectives were also examined during this step.

The fourth and final step involves the interpretation of meaning, in which the researcher produces thick descriptions and draws conclusions. For this study, this step provided context-specific explanations of integrated, differentiated and fragmented BUAs and identified discussion points for further investigation.

4.4 Stage 2—Case studies

4.4.1 Overview of the research design

Stage 2 adopted a case study approach that included the use of document reviews, a questionnaire survey and interviews to address the research question. The data analysis from Stage 1 shed light on a broad range of themes and helped in the development of additional questions for Stage 2.

This study used a multiple-case design. Herriott and Firestone (1983) argue that findings from multiple case studies tend to be more convincing and robust. Yin (2009) asserts that multiple cases can reveal both coherent and conflicting phenomena across cases. Using a multiple-case design made this study more robust and enabled the research topic to be explored more coherently. This stage also used a mixed methods approach. Results from the questionnaire survey were used to corroborate the findings from the interviews and document reviews for each case.
4.4.2 Data collection—data source and sample organisations

4.4.2.1 Sample organisations and interview participants

Stage 2 aimed to include a minimum of two organisations as case studies. To achieve this, the most recent Australian Government Organisations Register (as at 12 September 2016) from the Department of Finance website was used to identify a set of sample Commonwealth government agencies located in Australia. A total of 1,218 Australian government organisations were listed on the register. The sample was selected on the basis that they were 1) an entity within the general government sector and 2) exposed to higher levels of risk.

The Department of Finance (2016) defines the general government sector as ‘government-controlled entities that provide public services which are mainly non-market in nature, mainly for the collective consumption of the community, involving the transfer of redistribution of income and financed mainly through taxes and other compulsory levies’. This criterion was adopted to ensure the comparability of public sector organisations.

The level of risk encountered by a particular organisation was identified by examining audit reports, better practice guidelines and media available on the internet. The identification is based on the frequency of the organisation’s appearance in the Australian media and is subject to greater scrutiny, for example court or regulator investigation. The organisations exposed to higher levels of risk are selected because these organisations are likely to have a greater interest in risk management (ANAO, 2014b). Selecting organisations with similar level of risk also control for the environment in which sample organisations operate so as to facilitate the comparability of the effect of risk culture across organisations. On the basis of these criteria, 22 organisations were selected and invited to participate in the research. From these, four organisations expressed their willingness to participate. One of these organisations
(Organisation A) permitted only one interview and only a small number of questionnaire responses were returned. This organisation was removed from the analysis because of the limited data. Consequently, three organisations (Organisations B, C and D) were included in the analysis—their profiles are discussed in Chapters 6, 7 and 8, respectively.

The next step involved the selection of participants from the organisations. A reliable sampling method that provided an unbiased selection of samples from the population (Fowler, 2009) was required for the survey. When sampling for surveys, Martin (2001) suggests that samples be ‘representative of the population that is being generalised about’ (p. 215). In this study, it was essential to include representative organisational members from both the executive and the operator groups. If only certain subcultures had been represented, the organisation-wide dynamics of BUAs may not have been captured, resulting in conclusions being drawn from the beliefs and attitudes of particular groups. According to Martin (2001), this flaw has been common in cultural studies.

To protect privacy and confidentiality, Australian public sector organisations do not disclose staff contact details, apart from those of executives, which limited accessibility to samples in the public sector. As this study required data from different subcultures, the researcher contacted the heads of government agencies to obtain contact information for both executives and operators. Invitation letters were sent out to potential participating organisations with a request for access to organisational members at different levels and across various functions. Each potential interviewee was then invited to participate in the research. Prior to or during the interview process, the invitation letter, an information sheet and a consent form were presented to each participant, and permission was requested to audio-record the interview. Interviews were undertaken between March and June 2017.
Table 4.2 provides a summary of the number of interviews conducted. A total of 34 interviews across the four participating organisations were undertaken during Stage 2. Duration of the interviews ranged from 30 to 69 minutes. Apart from Organisation A, participants from the operator group comprised 54.5% to 66.7% of each organisation. Participants were invited from various functions and teams. A list of participants is provided in Appendix 3.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Executive</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Operator</td>
<td>0</td>
<td>4</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

4.4.2.2 Construction of interview questions and document analysis

Interview questions for Stage 2 were developed and refined from the findings of Stage 1. Additional questions were formulated as a result of emerging codes identified in Stage 1, such as blame environments, risk aversion and non-awareness of members engaged in risk management. A list of interview questions is provided in Appendix 4.

For the document analysis, publicly available documents were collected from the websites of organisations and public regulators, online archives and libraries and other media from the Australian public sector. A total of 19 documents were analysed, five of which were internal documents provided by organisations. External documents were publicly available online, including corporate plans, annual reports and reviews undertaken in recent years. Internal documents included risk management frameworks, risk matrices and a template for risk registers. For some internal documents, the researcher was allowed to observe and make notes onsite only.
4.4.2.3 Questionnaire development and administration of the questionnaire survey

Questionnaire surveys may be used to gauge the broad views of members of organisations and to provide quantitative data on the topic of interest (Fowler, 2009). A well-designed survey can provide reliable, comparable information for the research question and is versatile and flexible, enabling the researcher to explore the views of broad groups of participants (Check and Schutt 2011).

In studying organisational cultures, questionnaires are a popular option to investigate the broad views and perceptions of organisational members (Denison and Neale 1999; Hofstede et al. 2010) because they help to ensure an overall representation of the population under study (Yin 2009) and allow researchers to select larger samples (Cameron and Quinn 2011). Since this study focused on the BUAs of organisational members from two different subcultures, obtaining a broad range of BUAs was crucial in understanding the composition of risk cultural environments and how they influence members’ BUAs and their use of risk management. The data from the questionnaires were used to corroborate the data from documents and interviews. If any conflicting or ambiguous data were observed, the researcher investigated the gaps in detail to obtain an in-depth understanding of BUAs and cultural environments.

The questionnaire was developed on the basis of the relevant literature and findings from the Stage 1 analysis. There were two parts to the questionnaire: Part A included questions relevant to the research question, while Part B collected demographic information. Part A included six sections: The first section was designed to identify the risk management mechanisms existing in the organisation and the organisational members’ perception on its usefulness. The options provided to answer the questions were derived from the prior literature and the Stage 1 analysis and were categorised into formal and informal mechanisms. The second section asked questions about the purposes for which risk management was used by organisational members. This
section also explored organisational members’ BUAs on the usefulness of risk management for various decisions. The third section was designed to determine the effectiveness of risk management mechanisms, while the fourth section examined the effect of risk cultural environments. The fifth section, adapted from Cameron and Quinn (2011) and Parker and Bradley (2000), aimed to investigate the composition of different risk cultural environments in the organisation. The sixth section enabled participants to provide open comments.

Part B of the questionnaire gathered demographic data of participants, including their role in the organisation, the area in which they worked and their experience with risk management. Participants were also asked to select their role from the executive, designer or operator groups. Identifying subcultures was necessary to evaluate the dynamics between members’ BUAs for each organisation. The questionnaire was designed to provide anonymity of participants.

A pilot test of the questionnaire was undertaken over three phases. First, feedback from an ex-public sector executive, a risk expert and an operator was obtained to estimate the level of difficulty and the time required to complete the questionnaire. Second, two public servants and two participants from the university were asked to complete the questionnaire, which provided the opportunity to clarify wording and include terms that were familiar to workers in the public sector, as suggested by Mahama and Khalifa (2017). Finally, two additional operators working in public sector organisations were asked to fill out the questionnaire. This three-phase approach enabled the researcher to collect constructive comments and incorporate them into the questionnaire progressively. A copy of the questionnaire is provided in Appendix 5.

Due to limited accessibility to organisations, the individuals who complete the questionnaire survey was selected by each organisation and the questionnaire was distributed by either the coordinator of the agency or by the researcher. To ensure confidentiality and privacy of participants, due care was taken to ensure that participating organisations asked individual
participants to post completed questionnaires using the provided reply-paid envelopes directly to the researcher. The questionnaire survey was conducted from March to August 2017. Non-response bias was tested by comparing responses of first 30% of respondents to those of last 30% of respondents. No significant differences were shown in the responses of the two groups. Participants involved in the Stage 2 questionnaire survey are summarised in Table 4.3.

Table 4.3 Summary of participants of the questionnaire survey

<table>
<thead>
<tr>
<th>Organisation</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of questionnaires distributed</td>
<td>50</td>
<td>50</td>
<td>265</td>
<td>58</td>
</tr>
<tr>
<td>Number of responses received</td>
<td>7</td>
<td>20</td>
<td>119</td>
<td>32</td>
</tr>
<tr>
<td>Response rate</td>
<td>14.0%</td>
<td>40.0%</td>
<td>44.9%</td>
<td>55.2%</td>
</tr>
<tr>
<td>Number of useable responses</td>
<td>7</td>
<td>20</td>
<td>119</td>
<td>30</td>
</tr>
<tr>
<td>Response rate (useable responses)</td>
<td>14.0%</td>
<td>40.0%</td>
<td>44.9%</td>
<td>51.7%</td>
</tr>
</tbody>
</table>

In total, 178 responses to the questionnaire survey were collected across the four organisations, of which 176 were useable. Participants from the operator groups constituted 70% to 78.2% of organisations. The roles of respondents varied, from core operational functions to corporate functions. Given the low response rate and the small number of interviewees, Organisation A was removed from the case studies. Therefore, this study used three organisations, Organisations B, C and D, in the analysis. The profile of respondents is described in Table 4.4. Participants had an average of 8 years’ experience in their organisational areas, implying that they had sufficient knowledge about their organisations to answer the survey questions sufficiently.
Table 4.4 Summary of the profile of questionnaire respondents

<table>
<thead>
<tr>
<th>Organisation</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive group</td>
<td>6</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Operator group</td>
<td>14</td>
<td>93</td>
<td>23</td>
</tr>
<tr>
<td>No response to the group classification</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Average years of risk management experience</td>
<td>9.07 years</td>
<td>9.84 years</td>
<td>14.62 years</td>
</tr>
<tr>
<td>Participants’ working areas in the organisation</td>
<td>Core operations (organisation-specific), enterprise architecture, service delivery, policy, corporate support, technical practice, risk management function</td>
<td>Core operations (organisation-specific), training, corporate support (HR, IT, stakeholder relation), project delivery, intelligence or security, risk management function</td>
<td>Core operations (organisation-specific), compliance, corporate support (HR, IT, compliance), intelligence or security, risk management function</td>
</tr>
<tr>
<td>Average years of work experience in the organisational areas mentioned above</td>
<td>7.87 years</td>
<td>7.70 years</td>
<td>8.11 years</td>
</tr>
<tr>
<td>% of participants with the private sector experience</td>
<td>70.00%</td>
<td>65.55%</td>
<td>80.00%</td>
</tr>
<tr>
<td>Average years in the private sector</td>
<td>6.86 years</td>
<td>8.85 years</td>
<td>11.75 years</td>
</tr>
</tbody>
</table>

4.4.3 Data analysis

4.4.3.1 Interview and document data analysis

The method for coding interview and document data was the same as that used in Stage 1, except that coding categories were further refined for Stage 2. To fine-tune the coding categories, the first step involving the identification of emerging concepts. These emerging concepts were then reviewed to establish whether they could be incorporated with the existing concepts, while new and interesting concepts were analysed to identify any consistencies or discrepancies with the theoretical framework.
4.4.3.2 Questionnaire data analysis

To analyse the questionnaire data, SPSS Statistics 25 was used to conduct a descriptive statistical analysis and non-parametric tests. The data collected were first recorded in an Excel spreadsheet and then imported into the SPSS Statistics 25 program. Where no response was provided or the ‘not applicable’ option checked, the data were excluded for the particular component analysis. Comments provided in the questionnaires were imported into NVivo 11 for further analysis. Group classification responses were not provided in five of the questionnaires for Organisation C, so these responses were excluded from the comparison analysis of the two subcultures.

Two main analyses of the questionnaire data were conducted. First, descriptive statistics, such as mean, median and frequency, were applied to each organisation. This preliminary process facilitated understanding of members’ BUAs and their use of risk management for various purposes. Second, non-parametric tests were run to identify the differentiated BUAs and the differences in BUAs and use of risk management. The Mann–Whitney U test was used to identify significant differences in members’ BUAs between groups, while the Wilcoxon signed-rank test (exact two-tailed) was used to assess the difference between the BUAs and the use of risk management.

The purposes for risk management included in the questionnaire were classified into four categories on the basis of theoretical justification and relevance to the public sector. These four categories are initially developed from the public sector literature, which is then refined based on findings of the interviews from Stage 1. Table 4.5 outlines the four categories of the purposes for risk management: 1) strategic or operational decision-making, 2) compliance, 3) development and implementation of policy and providing advice and 4) assessment of downsides.
Table 4.5 Four categories identified from the theoretical groupings

| Strategic or operational decision-making | Prioritise resources  
|                                          | Develop strategies  
|                                          | Implement strategies  
|                                          | Assist with planning  
|                                          | Identify opportunities |
| Compliance                              | Comply with laws and regulations  
|                                          | Monitor regulatory compliance related to my area  
|                                          | Follow internal policies, procedures and processes |
| Development and implementation of policy and providing advice | Develop policies  
|                                          | Review policies  
|                                          | Provide advice to stakeholders  
|                                          | Prepare for external uncertainty |
| Assessment of downsides                 | Avoid risky activities  
|                                          | Prevent undesirable events |

4.4.3.3 Quality of case studies

To ensure the quality of the case study research design, this thesis applied the four criteria outlined by Yin (2009, p. 40) to ensure the quality of the research methods: construct validity, internal validity, external validity and reliability.

Construct validity refers to ‘identifying correct operational measures for the concepts being studied’ (Yin 2009, p. 40). Yin (2009) suggests that, to address construct validity in case studies, it is ideal to use multiple sources of evidence. This thesis collected data from multiple sources, including interviews, a questionnaire survey and external and internal documents. The corroboration of data from multiple sources helps ‘the development of converging lines of inquiry’ (Yin 2009, p. 115). The provision of multiple sources of supporting evidence to ensure the data accurately reflected the underlying constructs improved the validity and accuracy of this research. Construct validity was also achieved through the cross-checking the interview coding by the researcher and research supervisors.
Internal validity seeks to establish a causal relationship for explanatory or causal studies. As suggested by Yin (2009), this thesis sought to maintain internal validity through the use of pattern matching and explanation building in data analysis when analysing the research question, as outlined in Section 4.3.3.2.

External validity is perceived as being a fundamental issue for case studies as their applicability to other cases tends to be low. Yin (2009) argues that the external validity of case studies should be established from analytic generalisation, in which findings from multiple case studies are repeatedly analysed. The current thesis attempts to address external validity by using multiple cases and providing a comparative analysis of members’ BUAs, their use of risk management, risk cultural environments and risk mechanisms across the three organisations. For example, this study aimed to provide evidence on the similarities and differences between the integrated, differentiated and fragmented BUAs for each public sector organisation to show the extent by which the concepts adopted in this thesis may be supported by the findings. The ability to address external validity using multiple case studies depends on a sound theoretical framework (Yin, 2009), which was enhanced in this study through adopting a two-stage research approach by using the findings from Stage 1 interviews to refine the theoretical framework for the case studies in Stage 2.

Reliability in case studies is needed ‘to minimise the errors and biases’ (Yin 2009, p. 45). It is recommended that all procedures followed in case studies are documented to ensure transparency and accountability. Drawing on Yin (2009), this thesis used a case study protocol and developed a database that included documents, questionnaire comments and interview transcriptions to ensure reliability. By developing this non-interpreted database, including case study notes, documents, tabular materials and narratives, the reliability of the research may have been enhanced. A case study protocol is considered essential when a researcher conducts multiple case studies. The case study protocol used for the current study included an overview
of the case study research, the procedures to be followed in the field and an outline of the coding categories to be used in the case study summary report. These are presented in Appendix 6.

4.5 Ethical considerations

Ethics approval for this study was obtained from the Australian National University Human Ethics Committee. Consent from research participants was obtained and information collected from participants was kept private and confidential.

Information on participation and withdrawal was provided to interviewees and participants of the questionnaire survey. Interview participants were informed that participation was voluntary and that they could withdraw at any time without providing a reason. Consent was obtained from participants for interviews to be audio-recorded. Consent forms were provided and signed by interview participants. Survey participants were advised that participation was voluntary and that they could withdraw at any time prior to returning the completed questionnaire without providing a reason. Return of the completed questionnaire implied consent to participation in the survey. Further, individual respondents were informed that they would remain anonymous. The information sheets and consent form provided to research participants for Stage 2 are provided in Appendix 7.

4.6 Methodological limitations

This section addresses the inherent methodological limitations in the two-stage research approach adopted for this study, in particular those relating to the questionnaire survey.

Limitations of the questionnaire survey method in cultural studies have been articulated by Schein (2010). First, a limited understanding of what to ask in a questionnaire may limit the
usefulness of responses provided. This limitation was addressed by the two-stage approach used in this thesis—the findings from Stage 1 helped to develop appropriate questions for Stage 2 to ensure that relevant data were collected. This study develops the analytical framework based on the organisational theory, which initially guided data collection and interpretation. This may constrain the exploratory potential of the research or framed the interpretation of results. To mitigate this issue, the initial framework is refined using empirical evidence obtained during Stage 1. Also, the study prepared semi-structured interview questions so that interviewees can expand their scope of discussions and an open-ended comment section is also provided in the questionnaire survey. Second, Schein (2010) warns that, during interviews, participants who provide insights into their organisational culture may not be completely honest. Schein (2010) points out that participants may ‘resist and hide data that they feel defensive about’ or ‘exaggerate to impress the researcher or get relief’ (p. 181). Thus, during the interviews, views on the other group’s BUAs were sought to cross-check validity between members and ensure that members did not simply reveal their aspirational BUAs to the researcher. This concern was also addressed by corroborating the findings from multiple data sources in this thesis, including documentary analysis and questionnaire survey. Third, participants may not understand the questions or interpret the listed questions differently. To minimise this risk, a pilot study of the questionnaire survey was conducted to obtain feedback from participants of various backgrounds in the public sector and revise the questions accordingly.

Most importantly, Schein (2010) and Martin (2001) point out that what is measured in questionnaires may be superficial. Therefore, this thesis adopted a mixed methods approach, with simultaneous use of the interview research method to source data. The complexity arising from the dynamics of organisational members is captured through interviews. Moreover, to ensure that the completed questionnaires were obtained from a wide range of organisational members, the invitation letter requested that participants be from various departments within
the organisation. In so doing, this thesis exercises care by not superficially limiting the data on BUAs to the executives but attempting to obtain BUAs of different groups with various functions.

4.7 Summary

This chapter presented the two-stage mixed research method used for addressing the research question. It provided a rationale for the staged approach and the use of interviews, document analysis and case studies.

The interviews and document review of Stage 1 enabled a refinement of the analytical framework and helped to develop the questions used for the Stage 2 case studies. A total of 18 interviews with 20 participants across four organisations were conducted, while 10 corporate and internal documents were reviewed.

In Stage 2, case studies were undertaken to examine members’ BUAs, the use of risk management, risk cultural environments and risk management mechanisms through interviews, the questionnaire survey and the document review. For each organisation, a questionnaire survey was conducted to evaluate the broad views of both executives and operators in the organisation. The interviews and the document review were conducted to better understand risk cultural phenomena and to provide richer evidence to interpret the behaviours of organisational members. In addition to the review of 17 corporate and internal documents, a total of 33 interviews and 169 questionnaire responses were obtained and analysed across the three selected organisations.
Chapter 5: Stage 1—Analysis of results

5.1 Introduction

This chapter presents the findings from the Stage 1 interviews and discusses the following points: 1) how the findings helped refine the analytical framework and coding categories and 2) how the results contributed to the development of a questionnaire and a list of interview questions for the Stage 2 study. As discussed in Chapter 4, 18 semi-structured interviews with 20 interviewees were undertaken during Stage 1. Section 5.2 discusses the findings in relation to members’ BUAs and their use of risk management in the four organisations. Section 5.3 explores the characteristics of the risk cultural environments, Section 5.4 reports on the risk mechanisms adopted by the four public sector organisations and Section 5.5 provides a summary of the chapter.

5.2 Organisational members’ BUAs and their use of risk management

The research question of this thesis was developed to explore how risk culture influences the use of risk management in decision-making. To address this research question and to refine the analytical framework, the interview questions primarily focused on organisational members’ BUAs regarding the usefulness of risk management and their use of risk management for particular purposes. Participants from different levels and functions in each organisation were specifically asked about the purposes for which they used risk management and whether they believed it was useful.
5.2.1 Use of risk management

To identify the purposes for the use of risk management, members were asked whether they used risk management in performing their duties and, if so, to provide an example of their use of risk management.

Participants frequently stated that their primary reason for the use of risk management was for compliance purposes. They believed that risk management for compliance purposes was associated with accountability, governance, compliance with internal and external requirements and for monitoring of the level of compliance:

In the past, risk management practices are mostly compliance activities. (Organisation Alpha, Executive Groups 1 and 2)

Like the vast majority of people have to do it because it’s under accountable authority instruction, it’s mandated, it’s got heavy management endorsement and support, so it doesn’t make a difference. People have to do it, right? (Organisation Beta, Executive Group 1)

Because of the programs we work on and we have to think through, you know, our accountability requires to manage risks. (Organisation Gamma, Executive Group 1)

The risk management framework was probably adopted five years ago. So, before I was in this position, I think we did it out of compliance. (Organisation Gamma, Executive Group 3)

[I]t’s, you know,[ Organisation Delta’s] governance, so you have to have one. (Organisation Delta, Operator Group 1)

As anticipated from the existing research in the public sector, the use of risk management for assessing downsides was frequently mentioned by interviewees. Specifically, when organisational members perform their day-to-day jobs, they look for ‘what could go wrong’. Where risk is assessed at the higher levels of organisations, risk treatment strategies could be devised as part of the organisation’s operational processes:

What it means at the lower levels is they will look after small details. But most is about avoiding downside risks. (Organisation Beta, Operator Group 2)
Basic organisational risk might be leaking of one function’s documents. So, we have a system in place to actually manage and track those documents as they move throughout the organisation to make sure that none of that happens. (Organisation Delta, Executive Group 2)

Participants also highlighted that risk management in strategic or operational decision-making occurred primarily in resource prioritisation to manage fiscal pressure, workforce planning, project delivery, performance review and, occasionally, for seeking opportunities:

In the budget for this function, risk management is around deciding what you don’t need. It’s a tool to manage fiscal pressure. (Organisation Alpha, Executive Group 3)

Even, say, in recruitment processes and managing staff performance, going through a bit of process of, right, this person has done a, b and c, they should have done d, e and f. I want to get them to do d, e and f. I need to do these things to try to get them there, but if they don’t get there, then what’s the consequences, overall. (Organisation Delta, Executive Group 2)

Part of what we do is a lot of project-related work. So, for example, we will have certain deliverables and activities we need to put together. And we approach that from a project planning, using a project planning methodology. So, we will scope, we will establish timeframes, deliverables, and also consider risks, constraints, etcetera, we will actually manage that regularly… (Organisation Delta, Operator Group 2)

Where [the organisation] looks at the performance of the division, how we are going to deliver against our objectives, whether we have succeeded in meeting the broad performance objectives we’ve set ourselves, and we set out some of the risks that have either been addressed effectively or we look ahead to years’ challenges in some of the risks. (Organisation Gamma, Executive Group 2)

So, the risk management examples would be partnering with new organisations to do, to try innovative experiments or to just partnering with a new organisation so that we can consider and say that we don’t have to work all our traditional partners. We can get different results back by working with new partners. (Organisation Gamma, Operator Group 3)

Members also used risk management in developing and implementing policies and providing advice:
A good example is in providing advice to the minister on anything that I believe there is any degree of sensitivity ... So, it’s not just identification of these risks and sensitivity. There is also a bit of handling strategies to deal with it because the minister [says] ‘OK, thank you for identifying the issues and problems. What are we going to do about them?’ It is pretty important to do that in the same area. I think that’s to me if you are not giving that sort of advice to the minister, you are not doing your job properly. (Organisation Delta, Executive Group 1)

In a lot of the policy work we do, many of the policy work, the way that actual risk play out is often not always the same as you might perceive in a risk register. It’s not just like a financial risk, it’s not often black and white. So, you know the way that actual risk evolves, it’s often quite different in a policy context or political context, it’s often not as clear-cut as in a just financial risk. So, therefore, the measures to respond often you need to be a little bit, you have to keep innovating risks. It’s impossible to foresee precisely how risk will actually evolve in a political and policy context. (Organisation Gamma, Executive Group 2)

The coding categories developed previously for the use of risk management for different purposes were based on the existing literature and were sufficiently comprehensive. However, additional categories arising from the interview findings were added to the existing categories—these included accountability, responsibility and transparency, good governance and stakeholder engagement. Further, categories were classified under strategic, corporate, operational, project or program and tactical use of risk management to determine whether any patterns existed within each classification. It was also noted that it was important to ask about the purposes for and the methods of risk management and for interviewees to provide everyday examples. These questions were included in the interview prompts for the Stage 2 case studies.

5.2.2 Members’ BUAs

In the investigation of organisational members’ BUAs, this study particularly focused on identifying integrated, differentiated or fragmented BUAs as conceptualised by Martin (2001). Comments from participants indicated that these three BUA perspectives regarding the
usefulness of risk management coexisted within each organisation. It was also noted that members’ BUAs seemed to vary depending on their reasons for using risk management.

First, participants tended to have integrated BUAs with respect to using risk management for compliance purposes. Interviewees expressed the view that risk management was useful for complying with internal and external requirements and in monitoring the level of compliance, although at times they felt that requirements could be excessive:

"Department of Finance and Department of Treasury demand to do risk assessments. So, management don’t have a choice in certain things. ... whether you like it or not you have to do risk assessments. However, there are areas actually after workshops and after our things [risk management for compliance], they see the value of it." (Organisation Beta, Executive Group 1)

"It’s [risk management compliance requirements] all helpful. I just think there is too much. Usually there’s too much because people are busy." (Organisation Beta, Operator Group 1)

Further, interviewees raised the issue risk management being conducted as a documentation or ‘box-ticking’ exercise—this was added to the existing coding category as an emerging code. In addition, a new interview question about the reasons for this opinion was included for the Stage 2 case studies to obtain a rationale for certain members’ attitudes towards ‘box-ticking’ risk management:

"I think at times the process is seen as like an audit requirement ... something you should do, kind of, you know, just tick in the box, ... we need a risk register. And the thing that I’ve seen is that it gets focused around outputs which is a bit of paper..." (Organisation Delta, Operator Group 3)

Second, integrated BUAs were observed in the use of risk management for preventing undesirable events and avoiding risky activities. Participants declared that members in their organisation tend to consider risk itself as negative, while risk management was recognised from its traditional perspective as the management of downsides:
I’d say **risks are seen as negative**, not as an opportunity. I think risk is also seen very much through the lens of traditional government transactions, not through the commercial lens which tends to be more opportunistic and tends to be, you know, what are the potential benefits of doing this as opposed to what are the negatives that can happen. I think it’s just a frame of the mind and we very much take the public service traditional view of reputational risks and fraud risks as opposed to opportunistic risk. (Organisation Gamma, Executive Group 2)

Risk management for assessing downsides was sometimes perceived as ‘avoiding risk’. This notion of risk aversion was frequently brought up by interviewees, corresponding to claims in the existing literature that the public sector tends to focus on defensive or secondary risk management (Hood, 2002; Power, 2004):

*If a policy with risk aversion characteristics is preferred by a minister, it is difficult to hold a balance ...* (Organisation Alpha, Executive Groups 1 and 2)

*They get trained to be more risk averse.* (Organisation Beta, Operator Group 2)

*[A]s part of the organisation, they are more risk-averse than others.* (Organisation Delta, Executive Group 3)

Differentiation and fragmentation were observed in the differences between BUAs of the executive and operator groups, and within the operator group. While participants from the executive groups considered risk management to be useful in making decisions, participants from the operator groups tended to have different views—some believed that risk management was useful in decision-making, but others found that risk management was only useful in compliance or assessing downsides:

*Yes, I think it [risk management for operational decision-making] is very helpful. ... it is very practical. ... So, you will see case studies, you will see examples.* (Organisation Gamma, Operator Groups 1 and 2)

*There is less or a lack of awareness of risk management in line areas ... It is case-by-case, depending on teams and individuals. For example, [the main operational function] is used to use risk management for compliance.* (Organisation Alpha, Executive Groups 1 and 2)
[T]here is always a pushback because they see risk management as [an extra task to do]. They don’t see it as part of everyday, what they should be doing. … If something comes up, the last thing certain people think of is risk management. What they don’t realise is the benefits that they actually get from doing it. (Organisation Beta, Executive group 2)

Embedded risk management emerged as a new code to be added to Stage 2. Certain participants argued that some organisational members from the operator group may not be aware that they used risk management because it was embedded in operational decision-making:

[A]s a consequence, every day those staff will be making, doing work that amounts to risk management. Does that mean they think that they are doing risk management? … In the day-to-day work, … I am not sure how many people would actually describe some of their work as being related to risks. And yet it is. (Organisation Delta, Operator Group 1)

[O]ne of the staff will be assessing a [core operation] application, [the staff] will be utilising a framework to assess it against. That framework will have been developed as one of the [risk management] treatments that we have for [potential] financial failure of the organisation. So, they are using a component of the risk management framework … but they wouldn’t. I am fairly certain if you ask them, they wouldn’t think of it as part of a risk management framework. They would think of it as the checklist that they are using against what they are assessing. But it is one of the [risk] treatments we utilise. (Organisation Delta, Executive Group 3)

It became apparent that additional questions needed to be developed to determine the causes of fragmented BUAs.

5.2.3 Summary

In summary, the interview responses implied that members’ BUAs tended to come from either the integrated or the fragmented perspectives, depending on the member’s purpose for using risk management. This supports the application of these concepts to the Stage 2 case studies. Emergent codes were derived from the interviews and added to the existent coding categories, and additional questions on the purposes for risk management and everyday risk management examples were identified.
5.3 Effects of risk cultural environments

This section discusses the interview findings in relation to participants’ comments on the characteristics of different risk cultural environments within organisations.

5.3.1 Controlling risk cultural environments

From Cameron and Quinn’s (2011) typology and Parker and Bradley’s (2000) public sector organisational culture, the characteristics of a controlling risk cultural environment include hierarchy, formalisation, standardisation, structure, conformity to rules and policies, predictability and safe decision-making aimed at stability and dependable delivery.

In responding to questions on the use of risk management, interviewees mentioned various characteristics of the controlling risk cultural environment. They also highlighted that the effects of these characteristics could be either beneficial or detrimental depending on how they influenced members’ BUAs and their use of risk management:

So, there is a fairly structured way [of risk management] ... Given the nature of the organisation, in fact that large part of the organisation is quite hierarchical at the moment, I think the risk management framework is most effective, because it [structured and hierarchy] is the way of doing it [risk management]. You know if you are the doing this, you follow this [risk management]. (Organisation Alpha, Executive Group 3)

I do get the impression here that there are sometimes overzealous risk managers who have a template and format and approach in their minds. And getting them to think about, instead of turning around and saying that people don’t do what we want them to do and just turning it around and ‘how we get that to happen?’ and the risk managers’ initial response is ‘Let’s mandate this’. (Organisation Beta, Operator Group 1)

In fact, [senior executive] commonly acknowledged that you got promoted in [Organisation Gamma] through being a safe pair of hands ... It [risk management] was released under cover of what we call [a formal process], which is very formal communication from our senior executives to all staff. ... so, having come out of under cover of [formal
processes], staff immediately recognise [that] this is a formal document and that they are expected to become familiar with it and that it has the support of senior executives. (Organisation Gamma, Operator Group 1 and 2)

[All that’s covered in the risk policy in the [Organisation Delta’s] framework. And the escalation points depend on the nature of risks, what it’s related to as well, but there is a hierarchy of people within the organisation, within a program area, they are identified as authorities in a risk approval space. And so, each program is required to put together probity plan and consideration of how they are going to manage risks. (Organisation Delta, Operator Group 2)

Comments from the majority of the participants implied that, irrespective of the type of core operations or the size of the organisation, the controlling risk cultural environment was the primary cultural environment within the four public sector organisations.

5.3.2 Goal-oriented risk cultural environments

The characteristics of goal-oriented risk cultural environments include competitiveness, a focus on results, a commitment to meeting high demands, improved performance against targets and meeting stretch targets. In line with Drennan and McConnell (2007), it was expected that organisational members would be aware of the importance of risk management in accomplishing operational goals and improving their performance.

The interview responses indicated that the goal-oriented risk cultural environment may constitute a relatively major proportion of the overall risk cultural environments across the four public sector organisations, which was consistent with Parker and Bradley’s (2000) findings on organisational cultures in the Australian public sector. Some participants stated that they used risk management in the prioritisation of resources to achieve operational goals:

Because of works, [we used risk management]. We have finite amount of money and we have increasing number of [core operations]. How do you allocate resources across those areas? You allocate where you get
Some operators from Organisation Gamma argued that members used risk management to achieve their objectives because of their competitiveness:

\[ T \]he key thing that we, my working group was conscious of drafting innovation strategy and putting risks in the same category is related to ... [the fact that] we are highly competitive organisation... (Organisation Gamma, Operator Group 1 and 2)

Interviewees from particular organisations tended to refer to the characteristics of goal-oriented risk cultures more frequently, implying that certain public sector organisations have a greater degree of this type of culture. In these cases, the characteristics of the goal-oriented risk culture appeared to influence the way members used risk management for operational decision-making, as participants called it ‘risk-based’ decision-making. Because of the demand for goals to be achieved within certain timeframes and for commitments to meet specified targets, operational members in certain teams considered the level and the implication of risks when making decisions.

5.3.3 Collaborative risk cultural environments

A collaborative risk cultural environment is characterised by the sharing of risk information, participation, interaction, mentoring and support. From the prior research in the field of organisational culture (Cameron and Quinn, 2011; Parker and Bradley, 2000), it was expected that collaborative environments would not constitute a major part of the overall risk cultural environment in the sample organisations.

Despite this, some participants mentioned characteristics of a collaborative risk cultural environment, which were helpful in decision-making. For example, collaboration and a
teamwork mentality helped interviewees to share their understanding of risk information on specific topics with other members and to discuss various views on particular issues:

“[W]e run it [risk] through the branch’s leadership group. We just come together once a week as a leadership group. We talk about what we’ve got on, what’s our priority, not a priority, how we will show it [risk] and how we will do it—so it is quite intuitive, but it is collaborative rather than me just sitting here and doing it ... so, it requires a lot more work around collaboration and conversation to bring people to the same frame of reference so you can then say, here is the decision that we are thinking of making.” (Organisation Alpha, Executive Group 3)

“I think, similar to myself that, because we are using that project management mentality, that whenever we are considering different options, we are always talking through ‘OK, what are the cost of this, what are the benefits, what are the risks?’ As a team collectively, we talk about risks. And as part of our role being advisors is that we have to actually have an understanding of risk management ourselves. So, there’s a bit of theoretical understanding of risk management.” (Organisation Delta, Operator Group 3)

It was noted that when interviewees talked about the way that they were using risk management in decision-making, they often mentioned the characteristics of the collaborative risk culture. These characteristics were also associated with those of informal risk management mechanisms, such as informal risk conversations or informal risk assessment. Hence, informed by the findings from Stage 1, this thesis further examined the effects of the characteristics of a collaborative risk cultural environment in the Stage 2 case studies where sample organisations had a more prominent collaborative environment.

5.3.4 Innovative risk cultural environments

The literature on risk management in the public sector (ANAO, 2009; McPhee, 2006a) suggests that the characteristics of an innovative risk cultural environment may not be easily observed in government agencies. These characteristics include innovation, risk-taking, focusing on new resources and challenges, improving operations and services and prospecting for opportunities.
Contrary to the expectation that only a few participants would discuss the characteristics of an innovative risk culture, all participants from Organisation Gamma mentioned these characteristics because of the organisation’s recent emphasis on innovation. In Organisation Gamma, there had been an organisation-wide promotion of innovative thoughts and attitudes towards operations, including the assessment of upside risk as part of the initiative (Organisation Gamma, Internal document, 2015). Hence, some interviewees commented that the organisation provided an environment that facilitated innovation and sensible risk-taking:

[T]hey talk about innovational risks and trying to foster a more innovative culture in the organisation that takes risks into account, identifies risks, something you just have to manage and deal with, not be totally risk-averse and trying to encourage more risks, oh well, taking on sensible risks and how to manage risks sensibly. ... some of what we talked about in this innovation strategy is about trying to find ways of doing things slightly more risky, but not then losing all of your shirts because you are taking too much of risks. But taking smaller risks toward then hopefully being able to take larger risks with more success later. (Organisation Gamma, Executive Group 2)

[The head of the organisation] is trying to trust people and get rid of red tapes, unnecessary processes so that people have got the time to be creative, innovative and people feel there’s a culture that supports that. And that, of course, touches on risk management one way or another. (Organisation Gamma, Executive Group 3)

We are very aware that there will be a strong incentive being innovative and being a better risk manager, if people see their peers modelling those behaviours and being rewarded for those behaviours. (Organisation Gamma, Operator group 1 and 2)

Participants from the other organisations commented on characteristics of the innovative risk culture only very occasionally. In addition, there were few responses from interviewees regarding the effect of the innovative risk cultural environment on their perceptions and their use of risk management in decision-making. Therefore, for the Stage 2 case studies, it was clear that more direct questions should be incorporated into the questionnaire and interviews to gather further insights into the effects of the innovative risk cultural environment.
5.3.5 Summary

In summary, participants from the four public sector organisations provided their views. Their comments implied that controlling risk cultural environments were dominant in their organisations, while the characteristics of the other three risk cultural environments were mentioned less frequently. The findings also highlighted the potential influence of the different risk cultural environments on members’ BUAs and their use of risk management. In light of the responses from the Stage 1 interviews, it became clear that more direct questions concerning the goal-oriented, collaborative and innovative risk cultural environments needed to be added to the Stage 2 case studies to obtain a deeper understanding of how and why members perceived risk cultural environments to influence their BUAs and their use of risk management.

5.4 Risk mechanisms and their effects

Prior research in public sector risk management (McPhee, 2005b, 2006a, 2009) and the Commonwealth Risk Management Policy (2015) highlighted the need for a standard set of formal risk management mechanisms, which led to the implementation of risk management frameworks in public sector organisations. Standard formal risk management mechanisms include audit committees that oversee risk management in organisations, risk management functions, risk management policies, procedures and/or guidelines, training and tools and templates for formal risk assessment and reporting.

Participants from all organisations mentioned some of these formal mechanisms, arguing for or against their usefulness in shaping members’ BUAs or their use of risk management. Some interviewees, in particular those from executive groups, suggested that formal risk mechanisms could enhance a common and consistent understanding of risk management. In addition, formal mechanisms helped members to monitor critical risks to ensure they would not go unnoticed:
Common languages, risk appetite and tolerance for common understanding and yes, they establish consistent approaches. (Organisation Alpha, Executive group 1 and 2)

[There’s been a lot of development over time to get more consistency between each of the kind of suborganisational mechanisms that we use. ... I’ve been witness to lots of formal mechanisms where they do track risks over time; seeing changes in trends can be quite important. It might not be a critical issue today, but you may well be able to put strategies in place to ever becoming a critical issue. (Organisation Delta, Executive Group 2)

In contrast, other interviewees cautioned that formal risk mechanisms could be too onerous and that formalisation had become the purpose of risk management rather than helping to manage the actual substance of risk. They also implied that formalisation of risk management might not be helpful in establishing favourable BUAs towards the usefulness of risk management:

I think the risk process can be a bit tedious and run that risk turning into a process rather than a real analysis that’s worth something. You can damage risk assessment processes by having too much trivial processes, which doesn’t have much value. Overcomplicated. (Organisation Beta, Operator Group 2)

I think, again, to try pigeonhole risk and risk management into one particular stream of activities, I think that means that you miss the point of risk management. I think you might capture everything if you are too fixated on the formal. There’s a fair chance that people get sick of doing the formal. (Organisation Delta, Operator Group 2)

Many interviewees commented on the use of informal risk management mechanisms, such as informal risk assessment or informal risk conversations, when making strategic or operational decisions. These participants described how they used informal mechanisms in decision-making for everyday tasks:

I think the most valuable risk [management mechanism] is probably the stuff that is not written down. The stuff that people work through in their head. The senior leaders who exercise their judgement, some of the stuff may not end up on a piece of paper, which then means you can’t, as an executive, you can’t track, share and learn. ... I put a little risk assessment in my head, saying, ‘Is this a reasonable thing to do?’; particularly when I am dealing with the difficult issues, that to me is a bit of my risk management around. It’s a bit of control in a way, say,
'What could go wrong here? Is it reasonable?' (Organisation Beta, Operator Group 1)

They [risk mechanisms] are probably more informal than formal. (Organisation Gamma, Operator Group 3)

The participants who used informal risk management mechanisms for their decision-making added that informal mechanisms enabled customisation of risk management and promoted utilisation of members’ experiences and skills:

So, for me, the best informal mechanism is to sit and talk the issue through. ... It’s informal. That’s the beauty of the informal system is you tailor to the individuals who are involved in a conversation. (Organisation Delta, Executive Group 3)

I think the informal process makes it, I think you get better compliance if it’s informal. And I guess this is why, you know, they’ve gone into this saying, ‘the most effective forms of learning are in the doing’ because it’s that informal that 70 per cent of everything that you know when you actually learn from your experience. I think that’s it. Risk management is really about doing. (Organisation Gamma, Executive Group 1)

Additionally, a combination of formal and informal mechanisms was considered more effective in managing risk in that formal mechanisms could provide an opportunity for informal conversations about risk. In line with Tekathen and Dechow’s (2013) opinion that risk mechanisms can provide an opportunity for interactive risk discussions, one interviewee pointed out that, while informal mechanisms are more directly involved in decision-making, formal mechanisms are needed to precipitate them:

Informal mechanisms, [such as] informal discussions, sharing information, telling stories about what works and what doesn’t work, providing there is a bit of framework, has more effect than making the framework more rigorous and more regularly reported. You need a framework to have informal discussion. (Organisation Beta, Operator Group 2)

Because only a few members provided insight into this topic, more direct questions regarding how and why certain types of risk management mechanisms influence members’ BUAs and their use of risk management were added to the Stage 2 questionnaire and interviews. In
addition, since participants appeared to use informal mechanisms more often in risk management for decision-making, a question regarding informal mechanisms was added to the Stage 2 interview questions.

5.5 Summary of Chapter 5

In this chapter, 18 interviews involving 20 participants from four public sector organisations were analysed to validate the analytical framework and to construct a set of questions for the Stage 2 case studies. Many participants used risk management for compliance or for avoiding risky activities. Some interviewees also discussed their use of risk management in decision-making. Integrated BUAs about the usefulness of risk management were seen in risk management for compliance or assessment of downsides, while fragmented BUAs were predominantly found in risk management used in decision-making. As a result of the interview analysis, emergent codes were added to the coding categories and additional questions were identified to elaborate the purposes of risk management and to obtain everyday risk management examples.

There were frequent comments about the characteristics of the controlling risk cultural environment, such as formalisation, hierarchy, structure, dependable delivery, stability and conformity to rules, which appeared to both positively and negatively influence members’ BUAs and their use of risk management. There were fewer comments about the characteristics of the other three risk cultural environments, such as goal accomplishment, collaboration and risk-taking. Therefore, more direct and detailed questions were included in Stage 2 to gain more information from participants on these topics.

Formal mechanisms tended to be standardised across the four different organisations, facilitating members’ common understanding and their consistent use of risk management.
However, they had a negative effect on members’ BUAs and their use of risk management when formalisation and standardisation became too onerous. In these situations, participants tended to use informal risk mechanisms in decision-making because they enabled customisation of risk management relevant to the task and allowed members to use their own experiences and skills. From the interview findings, additional questions were identified regarding how and why certain risk mechanisms, in particular informal mechanisms, influence members’ BUAs and their use of risk management.
Chapter 6: Stage 2—Organisation B’s risk culture and risk management

6.1 Introduction to Chapters 6, 7 and 8

The findings from the case studies are discussed in Chapters 6, 7 and 8, which highlight how the BUAs of members influence their use of risk management in decision-making. The study explored two artefacts of risk management—risk management mechanisms and risk cultural environments—to show how they influence members’ BUA and their use of risk management.

The analysis of each case study commenced with an overview of the organisation’s background. Background information was established to ‘set the scene’ of each organisation’s risk culture and risk management practices and was collected primarily through analysis of publicly available reports and interviewee comments.

Each case was then examined in detail by analysing the findings on the BUAs of members and their use of risk management for different purposes and whether members’ BUAs differed from their use of risk management. The risk cultural environment of each organisation and its effect on members’ BUAs and their use of risk management was investigated. The formal and informal risk management mechanisms available in each organisation, their perceived usefulness and how they affected members’ BUAs and their use of risk management were also explored.

Analysis of these themes was based on both questionnaire and interview data. In particular, evidence from the questionnaire survey highlighted the association between organisational members’ BUAs about the usefulness of risk management and their use of risk management for various purposes. The overall effect of the risk cultural environment and risk management
mechanisms on members’ BUAs and their use of risk management was revealed by the questionnaire data.

Interviews were then used to extract data for a more in-depth analysis of how members’ BUAs about the usefulness of, as well as their use of, risk management were influenced by the risk cultural environment and risk mechanisms. Specifically, interview findings provided evidence on how different risk cultural environments and risk mechanisms influenced the way members think about and understand the usefulness of risk management and the way they use risk management.

6.2 Organisation B: Background

Organisation B is primarily responsible for administering an important national asset for Australia. Its role is to establish awareness and a positive environment with respect to the asset through a world-class system of administration. The organisation, by embedding risk management into its governance and management processes, analyses and evaluates risks to protect accountability, quality and staff well-being (Organisation B, Corporate Plan 2017–2021, 2017).

Risks faced by Organisation B primarily arise from administering the national asset. When managed well, it provides opportunities to facilitate innovation on a national scale. However, if the organisation were to be involved in a court case, consequently, its reputation could be damaged if this was managed badly. Although Organisation B had an existing risk management framework at the time of data collection, it was in the process of reviewing its formal risk management mechanisms, including its policies and training materials. The revised framework was considered an improvement because the organisation had adopted a stronger enterprise-wide approach. The benefits of the ERM approach has been discussed in the literature—it has
been strongly recommended for adoption by both the private and public sectors and has been endorsed by regulators, professional associations and rating firms (Mikes, 2009; Power, 2004; Hinna et al., 2018).

Organisation B’s espoused beliefs and values on risk management are articulated in its corporate documents and policies. The organisation promotes risk management formally through its risk management framework to ensure risk management is integrated into core decision-making processes (Organisation B, Corporate Plan 2017–2021, 2017). However, the section articulating the organisation’s risk management framework is brief and implies that the organisation takes a generic public sector approach to risk management. In addition, much of its documentation focuses on governance and accountability.

Organisation B’s most recent annual report highlights that risk management is ‘a key decision-making tool’ (Organisation B, Annual Plan 2015-2016, 2015, p. 238), providing its corporate risk register and treatment strategies as examples. The organisation asserts that it has improved the connection between the register and operational plans and has raised risk management knowledge (Organisation B, Annual Plan 2015-2016, 2015). It appears that the espoused values of Organisation B aim to support the use of risk management in decision-making by managing and embracing risk.

6.3 Organisation B: Members’ BUAs and their use of risk management

This section discusses how the BUAs of Organisation B’s members are related to their use of risk management in decision-making.
6.3.1 Organisation B: Members’ BUAs and the purposes for which risk
management is used

This section provides an overview of members’ BUAs regarding the usefulness of risk
management and the purposes for which risk management is used in Organisation B. A detailed
analysis of the questionnaire and interview responses, including statistics and interview quotes,
are provided in Appendix 8. Participants reported that, overall, risk management was
moderately useful in performing their tasks. Risk management was considered most useful in
strategic and operational decision-making, moderately useful in policy-focused activities or for
providing advice and least useful for compliance or for assessing downside risks.

Perceptions on the usefulness of risk management for strategic and operational decisions
differed between the executive groups and the operator groups, indicating differentiated BUAs.6
Respondents from the executive group believed that risk management was very useful for
strategic or operational decisions, while the operator group believed that risk management was
only moderately useful for these purposes. There was no difference in the BUAs of the
executive and the operator groups regarding risk management for compliance, the development
and implementation of policy and providing advice, and the assessment of downsides—both
the executive and operator groups believed that risk management was only moderately useful
for these purposes, indicating the existence of integrated BUAs.

On the basis of the interviews, some operators in Organisation B had diverse views on the
usefulness of risk management for strategic and operational decision-making, and policy

6 For the purpose of this thesis, integrated BUAs and differentiated BUAs are interpreted as the extent of alignment
of BUAs between the executive and operator groups, which was shown by comparing the difference in the mean
scores for BUAs between the two groups using the questionnaire data. A significant difference in mean scores
between the two groups indicates the existence of differentiated BUAs. No significant difference in mean scores
represents integrated BUAs. Further evidence of the existence of differentiated or integrated BUAs was obtained
from the interview data. Fragmented BUAs is interpreted as the extent of alignment within each group and was
analysed using interview data.
development and providing advice, indicating fragmented BUAs. Some operators considered risk management to be ‘vital’ in the running of day-to-day operations, such as assessing and approving applications or providing financial or technical services to internal stakeholders:

It [risk management] is vital to what they [team members] do. We actually are proud of ourselves on being ... risk-managed security practice rather than a compliance-based security practice. It is—everybody is on board. We talk about it [risk management] all the time. (Organisation B, Operator Group 3)

Some participants had not considered the usefulness of risk management in their daily tasks because it was so embedded in their operational processes. Other members of the operator group perceived risk management to be a box-ticking exercise.

With respect to the use of risk management, the findings revealed that members primarily used risk management for compliance purposes such as complying with external and internal requirements and to monitor compliance. Risk management was used less extensively in strategic and operational decision-making, the development and implementation of policies and providing advice, and assessing downsides.

In Organisation B, compliance-oriented risk management included identifying and assessing risks associated with rules and regulations. For instance, auditing and quality control are common risk treatments in monitoring compliance risks in the areas of information technology and agency-specific operations. In addition, many processes have been implemented to manage financial compliance risks under legislative requirements such as the Public Governance, Performance and Accountability Act and the Commonwealth Procurement Rules.

Risk management in strategic decision-making involves thinking about the risks and long-term consequences of implementing decisions. In terms of operational decision-making, participants commented that the organisation used rules and procedures to embed aspects of risk
management in some organisational operational processes, compelling members to consider areas of risk and to find controls.

Risk management in assessing downsides was also found. For example, to ensure security, members always searched for vulnerabilities to prevent the occurrence of undesirable events:

[R]isk management means identifying areas of vulnerabilities in systems, the way we handle the data, the way we store information and being able to identify and mitigate controls whether that would be procedural, technical, trying to manage those risks. (Organisation B, Operator Group 3)

6.3.2 Organisation B: Differences between members’ BUAs and their use of risk management

This section discusses whether members’ BUAs are related to the way they use risk management by exploring the differences between members’ BUAs and their use of risk management for the different purposes. Table 6.1 shows the association between members’ BUAs on the usefulness of risk management and their use of risk management.

Table 6.1 Difference between members’ BUA and their use of risk management

<table>
<thead>
<tr>
<th>BUA</th>
<th>BUAs</th>
<th>Use</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making strategic or operational decisions</td>
<td>3.52 (0.83)</td>
<td>2.95 (0.97)</td>
<td>0.023**</td>
</tr>
<tr>
<td>Development and implementation of policy or providing advice</td>
<td>3.28 (1.00)</td>
<td>2.93 (1.08)</td>
<td>0.006**</td>
</tr>
<tr>
<td>Compliance</td>
<td>3.26 (1.12)</td>
<td>3.36 (1.05)</td>
<td>0.533</td>
</tr>
<tr>
<td>Assessing downsides</td>
<td>3.23 (1.02)</td>
<td>2.80 (0.94)</td>
<td>0.188</td>
</tr>
</tbody>
</table>

*Wilcoxon signed-rank test—exact Sig(2-tailed)
**p < 0.05
Usefulness scale: 1: Not at all; 2: Slightly; 3: Moderately; 4: Very; 5: Extremely
Frequency of use scale: 1: Never; 2: Occasionally; 3: Sometimes; 4: Frequently; 5: All the time
Respondents’ BUAs were significantly different to their level of the use in the areas of making strategic or operational decisions, and development and implementation of policy or providing advice. Conversely, no clear difference was seen in the BUAs and use of risk management for compliance or for assessing downside risk.

Differentiated and fragmented BUAs and reduced use of risk management were observed in making strategic or operational decisions. One interviewee indicated the difficulty in establishing agreement between members on the usefulness of risk management, adding that only a small group of members used risk management in decision-making:

[A] very small cohort [used risk management for decision-making]. More broadly, I don’t think it is discussed a lot. They do have a risk management cohort with the representatives across the business. And that is what I mean by a small subset where they are trying to get buy-in [on the usefulness of risk management] from all of the areas and get everyone to agree. They are making active steps to address that. How successful that has been, I am not certain. ... but they can’t get the buy-in from people. (Organisation B, Operator Group 3)

One interviewee from the executive group explained that, because members were not proactive in using risk management in their day-to-day decisions, the executive group was required to provide more active support to members:

[W]e are pushing out more [risk management support] than we are pulling back in. ... no, I don’t think they [members] are proactive [in using risk management for day-to-day decision-making]. (Organisation B, Executive Group 2)

With respect to the area of development and implementation of policy or providing advice, the BUAs reflected that risk management was useful, which appeared to result in the use of risk management for this purpose. For example, one interviewee was enthusiastic about using risk management in providing advice about the effects of taking a particular action:

Yes, I think I do [risk management] all the time. ... Because it [risk management] allows me to quantify the advice that I am giving to people, [it is vital]. If I can’t explain to them why taking this action is going to
negatively impact the agency, like the risk to the agency, then people won’t listen to it. (Organisation B, Operator Group 3)

In contrast, if participants had little experience in using risk management, they tended to believe that risk management was not especially useful and were unlikely to adopt a risk management approach to reviewing policies:

No, [risk management was not useful]. I have to admit that I probably wasn’t considering risk management too closely when I first started the job. I don’t know whether knowing about all of those things [risk management], the frameworks, the policies, the registers and all this stuff actually change the way I approach things necessarily. (Organisation B, Operator Group 2)

Overall, the existence of these differentiated and fragmented BUAs about the usefulness of risk management in strategic or operational decision-making and the development and implementation of policies or providing advice appeared to be related to the lower use of risk management in these areas. The following sections provide an analysis of the composition of Organisation B’s risk cultural environments and its risk mechanisms and how they may influence members’ BUAs and their use of risk management.

6.4 Organisation B: The effect of risk cultural environments on members’ BUAs and their use of risk management

This section focuses on the composition of the risk cultural environments in Organisation B and how they influence members’ BUAs and their use of risk management for different purposes.

6.4.1 Organisation B’s risk cultural environments

This section provides a summary of Organisation B’s risk cultural environments (see Appendix 9 for a detailed analysis). According to the questionnaire responses from members,
Organisation B primarily exhibits the characteristics of a controlling risk cultural environment to a greater extent than the characteristics of the goal-oriented, collaborative and innovative environments. Figure 6.1 illustrates the current and preferred composition of risk cultural environments as perceived by the questionnaire survey participants.

Figure 6.1 Organisation B’s composition of the risk cultural environments

Organisation B has a stronger controlling risk environment than a goal-oriented environment because of legislative requirements and the need for efficiency. However, the relative strength of different cultural environments varies across different functional areas. For example, a stronger controlling environment was evident in one area, while a stronger goal-oriented environment was seen in another. Collaboration and sharing of risk information tended to occur
primarily at the top. Members, nevertheless, wished for the stronger presence of both the collaborative and innovative risk cultural environments.

6.4.2 The effect of Organisation B’s risk cultural environments

The composition of Organisation B’s risk cultural environments provides some insights into how and why members possessed certain BUAs and used risk management. In Organisation B, the introduction of its controlling risk cultural environment was associated with its approach to core operations, which involves granting approvals for applications. The organisation encountered risks associated with a backlog of applications, such as delayed processing times and customer dissatisfaction. Once they had addressed these risks, the organisation turned its focus to the quality of approval decisions because of their far-reaching implications. To manage risks associated with approval decisions, such as approvals potentially being opposed by other parties, the organisation employed several oversight committees to develop and monitor a quality control and audit program that incorporated a set of formal rules and standards.

The controlling environment played an important role in maintaining a high standard in granting approvals. This was achieved by randomly reviewing operators’ day-to-day decisions using a quality control system that incorporated formal standards, manuals and monitoring processes. Operators in this function were required to follow rules and procedures and translate these into compliant practices. A quality review procedure was used to assess task outcomes to ensure that any risks associated with approvals potentially being opposed or rejected had been mitigated. Initially, operators were randomly selected for review—using a risk-based approach, this random sampling was then adjusted so that operators who consistently received good reviews were reviewed less frequently. Additional rule-based procedures in the quality control system included internal and external audits on the quality review procedure itself:
So, there is a big risk for us in terms of keeping people up to date with that skill [skill required for core operation] because if we don’t, then we have a higher risk of [an application of asset being approved]. That would be overturned or might get opposed or it just won’t be strong enough to withstand any opposition or something like that ... we have a quality management system. ... So, a quality review system is just a part of that. ... We also have an external audit. So, we recently had for example ... external auditor came in and they go around and speak to different groups. This year they actually came to the section. They spoke to me about quality management and quality process and quality assessment and everything. But then they also went straight to a trainee to see what their understanding was about the whole quality review system. (Organisation B, Operator Group 2)

However, as shown in Table 6.2, members did not believe that a controlling environment positively influenced their BUAs or use of risk management. One interviewee believed that a stronger controlling risk cultural environment could, in fact, be detrimental to members’ BUAs because it may compel them to focus on following rule-based risk management rather than allowing them to be creative and innovative in improving their work practices:

[W]e have a group of very intelligent people. You know, they are highly educated people and we have this bit of tension between ‘We will bring you on board, we say you are going to be looking at all this relative work and new technologies and all that kind of stuff’. But we then sort of say, ‘Well, we have to follow all these rules’. And it dampens down a bit of their own creativity and innovativeness and that, I think, influences other things in the workforce. It doesn’t necessarily do any damage to the products they do because they get it right because they follow the manual. (Organisation B, Operator Group 2)
<table>
<thead>
<tr>
<th>Table 6.2 Effect of the risk cultural environment</th>
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<tr>
<td><strong>A collaborative environment helps organisational members to:</strong></td>
</tr>
<tr>
<td>• understand the executives’ thoughts and attitudes towards risk management</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• manage risks in decision-making</td>
</tr>
<tr>
<td>• enhance their belief that risk management is useful.</td>
</tr>
<tr>
<td><strong>An innovative environment helps organisational members to:</strong></td>
</tr>
<tr>
<td>• understand the executives’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• manage risks in decision-making</td>
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<tr>
<td>• enhance their belief that risk management is useful.</td>
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<tr>
<td><strong>A goal-oriented environment helps organisational members to:</strong></td>
</tr>
<tr>
<td>• understand the executives’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• manage risks in decision-making</td>
</tr>
<tr>
<td>• enhance their belief that risk management is useful.</td>
</tr>
<tr>
<td><strong>A controlling environment helps organisational members to:</strong></td>
</tr>
<tr>
<td>• understand the executives’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
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<tr>
<td>• manage risks in decision-making</td>
</tr>
<tr>
<td>• enhance their belief that risk management is useful.</td>
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Scale: 1: Strongly disagree; 2: Disagree; 3: Neither disagree nor agree; 4: Agree; 5: Strongly agree

In addition, the controlling environment used in the process of managing quality-related risks resulted in members assuming that their work was being negatively assessed—for this reason, they did not have a high regard for the risk-based quality review and audit approach:

*I t* [the quality review system] was really strongly disliked. Because all of a sudden examiners who are highly qualified people we were having their work looked at and we were being told, *‘No, you actually made a mistake here ... when we first started the system, everybody just thought ... it was just a case of people thought that they are going to lose their job and we are going to get them into lots of troubles. They took it very, very personally.* (Organisation B, Operator Group 2)
With its focus on dependable delivery, predictability and stability, the controlling environment also led to a culture of risk aversion in the organisation, which hindered innovation. Further, members had no opportunity to be creative in their day-to-day jobs, evidenced by comments from the questionnaire responses:

*Risk management is a mature and formal practice. Differing risk appetites are acknowledged formally by the executive, but, in practice, a dominant risk-averse culture can mean a perception of over-governance of innovative initiatives by the leaders of these projects. (Organisation B, Executive Group B19)*

*Employees performing their roles in a repetitive, unimaginative manner, which is aimed at ‘compliance’ but saps any imagination or creativity. Obviously, we are required to assess applications themselves for compliance and we aim to provide ‘consistency’ to our customers, but this seems to come at a cost. (Organisation B, Operator Group B16)*

As well as imposing rule-based core operational procedures as a characteristic of its controlling risk culture, Organisation B had developed other formal rules and standards on risk management without explaining their rationale or benefits to members:

*It is largely rules-based around the legislative guidance from the government ... in the [Organisation B] and particularly a lot of these functions, they are fairly proceduralised. So, a lot of things are documented and most things are documented. (Organisation B, Operator Group 4)*

Because of no communication of the rationale or benefits of risk management, many operators in the organisation were not aware that they managed risks in their operational procedures. Interviewees commented that the more junior members were, the more unlikely it was they were aware of managing risks because, from their perspective, they were simply following formal rules and standards. Because risk management as part of daily operations was not made explicit, operators perceived that either members were unaware of managing risks in their day-to-day tasks or their use of risk management was intuitive. Thus, members considered that the risk management they undertook as part of their job did not address the actual substance of risk; rather, it was the equivalent of documentation requirements since this tended to be the area in
which risk management was clearly articulated by the organisation. This, in turn, led to the BUA that risk management was a box-ticking exercise and ineffective in everyday decision-making. In response to the question of whether members thought risk management was useful in decision-making, one interviewee made the following comment:

At the moment, a risk culture is towards intuitive and tick and flick exercise to a degree. (Organisation B, Operator Group 1)

However, a small number of participants argued that, contrary to popular belief, the organisation’s strong controlling environment could positively influence members’ use of risk management. Proponents of a controlling risk culture supported the need for rules to facilitate accountability and responsibility and believed that Organisation B did not sufficiently exercise control over its members. One interviewee commented that certain members of the organisation took risks without proper consideration or approval by superiors:

[T]hey [certain members] accept a lot of risks on behalf of the agency, but they perhaps accept without seeking other subject matter expertise or approval from senior management. (Organisation B, Operator Group 3)

As mentioned in the previous section, the organisation’s dominant cultural environment varied between different functional areas. Depending on their team or function, members operated within a greater controlling or a greater goal-oriented environment. To illustrate this, members with certain roles tended to focus more on the short-term goals and performance of particular practices using a goal-oriented rather than a rule-based process, while members in another role strived to meet compliance requirements rather than focusing on achieving goals:

I would say it varies and it has different focuses. So, certainly around project management, their primary risk is about delivery at the expense of everything else. ... So, certainly where those functions come into interplay with procurement, financial transactions, there is probably not an equal emphasis across the spectrum of risks. Certainly, in the world of procurement, there is almost a legal mechanism to address the whole spectrum of risks, but that may not have been fully understood. When you go out to the projects [and they say], ‘Why do you need WHS
In addition, participants commented that they struggled to perform in an environment that incorporated both controlling and goal-oriented risk cultures, leading them to take risks in performing their jobs. In other words, the conflict between these two risk cultural environments influenced their BUAs. Under the auditing and quality control systems used by the controlling environment, members were expected to comply with rules and procedures to meet quality requirements, but under the goal-oriented risk culture, they were expected to meet short-term goals of achieving the desired number of approvals. Being required to operate under these conflicting environments meant that members took risks in the attempt to find a balance between the organisation’s rules and standards and achieving their functional goals. Thus, the presence of both the controlling environment and the short-term goal-oriented environment appeared to negatively influence their perceptions about the usefulness of risk management for achieving organisational goals and the way they managed risks:

[T]he tendency has to be to say, ‘focus on getting through your applications as fast as possible’. ... they are asked to produce a certain amount of work every year. And we break it down and sort of say, ‘Well, that means on average you have to do this band of work each week’. So, for some people, risk comes in for them when they are looking at a piece of work and they are going, ‘This piece of work looks really it might take for me a long time’. So, they will then look at all of their available information to them and risk managing, ‘Well, OK, I will use that over there or I will rely on that. I will rely on over there’ rather than maybe redoing the whole thing. ... that is, where they are taking the risk ... because they have this productivity expectations, they then tend to go ‘I will just have to broad-brush [focusing on key claims of assets] because that way at least I can meet my productivity expectation’. (Organisation B, Operator Group 2)

Organisation B’s smaller collaborative environment partially influenced the use of risk management. In day-to-day risk management, project risks were not shared across the various teams involved in the process. Risks were also not discussed across affected teams when
organisation-wide changes were instituted. Some participants were concerned about the potential negative implication of managing risks in a siloed way with a weaker collaborative environment:

[S]ometimes it is that patchy where the actual risk lies and what the work is ... something in the HR [human resources] section could detrimentally impact the whole IT [information technology] project but it is not taken account of ... there doesn’t seem to be that holistic approach to the process and destination (Organisation B, Operator Group 4)

Participants implied that a weak collaborative risk cultural environment may lead to one area undertaking activities without predicting its consequences in other areas, resulting in detrimental effects. Some participants were aware that risk mitigation strategies could be inconsistent and were not being used holistically for the organisation. In addition, it was not always clear who was responsible for risks. One participant commented that one executive or senior manager could not take full responsibility for risks, highlighting the importance of a collaborative environment for resolving risk management issues:

[F]or example, projects risk assessment is not shared to other functions, and each tends to operate in isolation. ... Each area is not talking to each other. ... Being aware of the risks and issues would be good. Currently, the organisation does not sometimes talk about [one of operations], causing problems because they are not talking with each other. (Organisation B, Operator Group 1)

[P]robably pretty siloed approach to the day-to-day risk.... it is hard at the single focus, like at the service level ... across the whole of the organisation had that discussion of reduction in processing time versus greater assurance that the system works to better outcomes, how do you normalise those discrete measures. ... what frustrates me ... is they don’t try to see ... the potential benefits rely on the potential risks to that all ... it is that how to get that bind-[ownership] and co-ownership like, at some point one exec[utive] can’t own everything [every risk]. There has to be co-ownership underneath the CEO and deputies. (Organisation B, Operator Group 4)

As the comment from the questionnaire response pointed out, in a weak innovative environment, members may not be presented with opportunities associated with risk management:
The opportunity side of risk management is not focused on at all in this organisation. The focus is on preparing for mitigating bad things, not fostering good things. And I think that it will always be the case when it is called ‘risk management’. Because, in common, a risk is a threat. ‘Risky behaviour’ never was a connotation of ‘opportunistic’. It more often means ‘reckless’. (Organisation B, Operator group B11)

Despite having a weak innovative risk culture, a small number of participants commented that certain functions or teams responsible for internal business processes prioritised risk-taking over goal achievement:

I don’t think they [members] always know what their goals are [in risk management]. And that comes back to them being very innovative. It is like, ‘Let us see what we can do’ without actually having a specific destination in mind. (Organisation B, Operator Group 3)

Although operators did not believe that an innovative risk cultural environment had been cultivated, the executive group mentioned that organisation-wide risk appetite statements had been developed to encourage members to take risks by taking on new challenges and developing new resources and processes. For example, to incorporate the central government’s increased risk appetite in internal financial arrangements, the executive group attempted to help members engage with risks using new processes:

[A] high risk appetite around innovation, trying new things, doing new stuff ... In order to do that [world-leading Organisation B’s operation], we have to go and do some new stuff. So that in itself has asked us then ‘If you are going to do innovation, you then have to look at risk’. So, I think that is a healthy engagement. The fact that we did talk through that risk appetite as an organisation is not something I have done before with the senior executive group. ... the reason we are there is because of the innovation. (Organisation B, Executive Group 1)

Some members mentioned the notion of an adaptable and sustainable risk cultural environment. Interviewees believed that the organisation could be more flexible in managing risks by nurturing an adaptable risk cultural environment, arguing that this may provide alternative solutions to problems and increase the chance of organisational success. Participants also believed that a sustainable risk cultural environment was needed because short-term risk
treatments tended to create ‘technical debts’ that needed addressing after completion of an operation or project.

In summary, Organisation B had a stronger controlling risk cultural environment that created fragmented BUAs and resulted in the decreased use of risk management in decision-making. A focus on formalisation and conformity to rules led to Organisation B incorporating risk management into its business processes. This embedded risk management required members to follow specified procedures without an understanding of the benefits of risk management. Therefore, some members were not aware they undertook risk management as part of their job, while others considered risk management to be nothing more than a box-ticking exercise. In both cases, these members did not believe that risk management was useful in their operational decision-making. The emphasis on dependable delivery, predictability and stability also deterred members from attempting responsible risk-taking or taking innovative approaches to managing risk, resulting in a culture of risk aversion within the organisation.

Participants wished to nurture a greater collaborative environment through the sharing of risk knowledge across the organisation, thus alleviating fragmented BUAs and enhancing the effective use of risk management in decision-making.

The following section discusses the formal and informal risk mechanisms in Organisation B and explores their effect on members’ BUAs.

6.5 Organisation B: Risk mechanisms and their effects

This section explores the use of formal and informal mechanisms in Organisation B and how these mechanisms influenced members’ BUAs and their use of risk management for different purposes.
6.5.1 Organisation B’s risk mechanisms

This section discusses members’ perception on the usefulness as well as their use of risk management mechanisms. A detailed discussion, including descriptive statistics and interview quotations, is provided in Appendix 10. As discussed in Chapter 2, the risk management literature reveals that many organisations adopt well-known risk mechanisms, such as risk registers and risk maps. These mechanisms are viewed as tools that may facilitate or discourage interactions among members (Arena et al., 2017; Themsen and Skæbæk, 2018). Consistent with these studies, Organisation B has established a set of formal and informal risk mechanisms, including an overarching risk management framework, online risk management training, a formal risk champion network, business plans incorporating risk management components, divisional risk registers, formal risk reporting and meetings, and informal risk discussions.

The risk management framework, the formal and informal support provided by the risk management function, informal risk management workshops, informal brainstorming sessions about risk management and formal meetings on risk management were all considered moderately helpful by members. The operator groups perceived informal risk management workshops as particularly helpful. Risk registers and external agency expertise were also considered beneficial.

Members predominantly used formal mechanisms such as risk management frameworks and business plans that incorporated risk management to manage risks. The executive group was more likely to use the support of the risk management function and risk reporting than the operator group, despite the fact that the major role of the risk management function was to oversee compliance and accountability. This may have been attributable to the relatively small size of the risk management function and the fact that risk reports were mainly provided to senior management. Interestingly, several risk mechanisms that were considered more than
moderately helpful were used only occasionally. Some members were aware that the organisation did not have a better capacity to engage with operational members in managing risks through workshops because of resource constraints. Other than workshops, risk management training was the least used mechanism. As part of their risk management framework review, the executive group was undertaking a review of the online risk management training.

6.5.2 The effects of Organisation B’s risk mechanisms

This section discusses the effects of the risk mechanisms used by Organisation B. Table 6.3 displays participants’ perceptions of the effects of formal and informal risk mechanisms. Respondents believed that formal and informal mechanisms in their organisation were similarly helpful in managing risks in decision-making. However, from the questionnaire responses, the effects of these mechanisms on members’ BUAs were unclear.
Table 6.3 Effect of risk mechanisms

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal mechanisms (systematic, structured mechanisms) help me to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.05 (1.23)</td>
<td>3.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>2.84 (1.17)</td>
<td>3.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>3.85 (0.75)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms (unwritten, implicit, or casual mechanisms) help me to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.00 (1.21)</td>
<td>3.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.20 (1.06)</td>
<td>3.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>3.15 (1.14)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Formal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.60 (1.19)</td>
<td>4.00</td>
</tr>
<tr>
<td>• are more important in risk management than informal mechanisms.</td>
<td>3.30 (1.26)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.45 (1.10)</td>
<td>3.00</td>
</tr>
<tr>
<td>• are more important in risk management than formal mechanisms.</td>
<td>2.65 (0.99)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>I think both formal and informal mechanisms are equally important in risk</strong></td>
<td>3.60 (1.43)</td>
<td>3.50</td>
</tr>
<tr>
<td>management.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scale: 1: Strongly disagree; 2: Disagree; 3: Neither disagree nor agree; 4: Agree; 5: Strongly agree

The effects of risk mechanisms on the use of risk management were extrapolated from the interview data and comments in the questionnaires. Members cited that particular risk mechanisms, such as risk conversations and meetings, were helpful as they stimulated thoughts and ideas. This is in line with Jordan et al.’s (2018) findings regarding the interdiscursive value of certain risk management mechanisms, which highlights that certain mechanisms could ‘mediate between different specialised and everyday discourses, i.e. as devices that render complex themes from specific fields of expertise accessible to broader groups of users’ (p. 51). Risk mechanisms could play a role in enabling members to think about a wider range of options in decision-making and the effects of their actions from different perspectives. Contrary to the argument in this thesis that risk mechanisms may be a tool for facilitating shared understanding
and beliefs, it was noted that participants valued risk mechanisms more when they served as a thought-provoking tool. For instance, risk mechanisms were considered helpful when deciding on the coverage of an audit for the organisation in the strategic planning process:

When I sit down and look at the decisions around what we are going to audit, [which] is an internal way of going, ‘Right, what are on there [risk registers] so that business that we have got coverage, are we asking the questions about each of those areas?’ ... Risk management is being smart about how you do your business in simple terms. I mean, it is very easy to think about what we do. Unless you ask questions about what can go wrong, what might not work, you are not actually thinking holistically about the work that you do. ... Let us think about what might happen. If you ask ‘what if’ questions, then you are ending up having a much more answer about what you are doing now ... in the sense of, going back to what was my premise for risk management, is what might go right or wrong with this. And have we actually thought about this holistically. So we were, for example, today talking through tenders about looking at new models of how do we partner with the private sector when you are buying and purchasing stuff around ICT [information and communications technology]. We are looking at a more partnership approach because we don’t have skills in-house. So, how do we set up the procurement frameworks in the right way? Who are the people advising some of that? Have we got the capacity that actually answers the questions? We are asking about if we change these components, what we are going to put in the tenders to the market, how will the market respond? ... otherwise, we look ill-informed in what we are going to the market with. As an example, that was today’s conversation. (Organisation B, Executive Group 1)

Many participants undertook risk management through informal risk assessment, continually considering risk, its impact and its treatment during operational processes:

[W]e tend to use that [informal risk assessment] most when we are planning things. We are looking at changing something—changing something or introducing something new and we would basically then go and be looking at what are the things that could go wrong or what might impact and then having a look and see, ‘OK, what could we actually do about it?’ ... I suppose it is one of the things that we talk about our risk management is, it is about managing, knowing, understanding and managing those uncertainties about what you are doing. ... For me, that is important for the role of the [main operational officers] because we have a crucial role to provide a valid [approval] for someone. So, we need to look at all of ‘How do we manage all of the risks where something could go wrong?’ So, in terms of what I do, we are constantly looking at where could things go wrong in the process because people are misunderstanding something, they need more
In addition, members considered risk appetite and tolerance statements and risk frameworks helpful because these mechanisms increased member accountability and signalled organisational expectations to members. One participant commented that risk appetite and tolerance statements helped in negotiations for projects with other teams and individuals because they were endorsed by organisational executives. If the case of a counterparty not agreeing to the level of risk, the member could quantify the impact of the risk to the organisation using official risk appetite statements. This finding is consistent with Maguire and Hardy’s (2016) discussions on risk mechanisms being actively used to construct and negotiate an ‘acceptable’ level of risks among stakeholders.

Members did not feel that their organisation needed additional mechanisms; rather, they preferred for existing mechanisms to be improved in terms of quality and functionality. For example, the organisation had a formal risk champions forum, but only the executive group expressed enthusiasm for it. For the operator group, the risk champions forum was not useful in distributing awareness or understanding about risk. One interviewee suggested that it may be more effective to find risk champions who were influential on operators’ BUAs.

Many participants thought that the organisation had a sufficient number of mechanisms but needed to focus more on their quality and simplicity, as well as enhancing the skills and knowledge of members who used them:

\[T]\text{o make it simple and pragmatic, rather than complex and rules required} (\text{Organisation B, Executive Group 2})

\[I\] \text{think we need to get better at that in making sure we have project managers with the right skills and experience to actually be able to spot risks in contexts.} (\text{Organisation B, Executive Group 1})

\[C]\text{ertainly, the quality and the use of it [risk management] is there to be improved} (\text{Organisation B, Operator Group 4})
In particular, risk management messages were important in articulating the benefits of managing risks, how to manage risks in certain contexts and why managers have to make specific decisions:

“We can make it work by highlighting risk management benefits.”  
(Organisation B, Operator Group 1)

“I don’t think, again, anyone gets the message [risk management was useful in making certain decisions]. Does everyone agree with it? Does everyone take it on board? Probably not, and it is probably that transparency about that decisions being reach. So [the message should be] we decided to do this project versus that project because it allows this benefit, not that benefit, and that is our priority at the time and it is that bit of staying on the course why decisions are being made.”  
(Organisation B, Operator Group 4)

Interviewees suggested that the rationale for risk appetite statements needed to be communicated and that members should be encouraged to discuss them more openly:

“It would be good to know risk management appetite statements and why the executives make certain decisions and accept risks.”  
(Organisation B, Operator Group 1)

“I think if they [risk appetite statements] are more widely known and more widely discussed, that will be far more effective for me.”  
(Organisation B, Operator Group 3)

“Certainly, probably, the executive decision-making processes are a bit of a black box sometimes. … It is not [about] how decisions are being made.”  
(Organisation B, Operator Group 4)

Participants implied that members would prefer mechanisms that would lead to interactions between different teams or functions and that would make risk management more relevant to their jobs. Participants felt that they needed more support and more transparent communication from executives and senior management. Participants would be more interested in managing risks if risk mechanisms were more relevant to their roles. Half of the interviewees discussed the importance of middle managers in discussing risk management in the context of their day-to-day operations—while certain middle managers discussed risk management with their team members, this was not a widespread practice:
I [a middle manager] certainly communicate [risk management success stories] around our budget achievements and audit status. That is, probably not on a regular basis but it certainly ... there is a bit of what do we learn from this and do we need to change processes and procedures to address it. (Organisation B, Operator Group 4)

In aiming for a greater degree of integrated BUAs, interviewees suggested that Organisation B should identify ways of influencing members’ BUAs more effectively. Some interviewees stated that members should be given opportunities to recognise risk management as more than ‘a process to come up with pretty documents’ (Organisation B, Operator Group 1) for the purpose of organically embedding the usefulness of risk management into members’ BUAs. One interviewee pointed out that Organisation B tried to influence members through a small group of risk management representatives:

More broadly [across the organisation], I don’t think it [risk management] is discussed a lot. They do have a risk management cohort with the representatives across the business. And that is what I mean by a small subset where they are trying to get buy-in from all of the areas and get everyone to agree, they are making active steps to address that. ... That [stronger risk culture] would be getting more people to buy in to risk management. ... Seek a way about how to get people interested. ... it comes down to getting people to buy in to risk. (Organisation B, Operator Group 3)

Other interviewees mentioned that the organisation needed to increase members’ risk awareness since some members were not aware that they managed risk on a day-to-day basis, while others used risk management reactively. Participants believed that raising the level of awareness in the organisation would enable a better discussion of the potential upside or downside issues and help guide new staff. It was believed that it was crucial to understand and to work with risk rather than be afraid of risk—one interviewee felt that organisations needed to encourage ‘a greater understanding that risk management is not a win-lose situation’ (Organisation B, Operator Group 4).

In summary, the organisational members believed that some mechanisms influenced their thoughts about and their use of risk management. In particular, risk conversations and meetings
could stimulate ideas about options and the impact of their decisions, while risk appetite and tolerance statements communicated to members the organisational expectations of risk management. For members to have a more positive view regarding the usefulness and the use of risk management in decision-making, participants believed that Organisation B needed to improve the quality and simplicity of their existing mechanisms and to enhance the skills and knowledge of members who use them. In addition, they considered risk mechanisms to be helpful in improving interactions between members’ and the job relevance of risk mechanisms. The role of middle managers is considered important in this respect.

6.6 Summary of Chapter 6

The analysis of results show that Organisation B’s members possessed differentiated or fragmented BUAs about risk management for making strategic or operational decisions and for the development and implementation of policy or providing advice. Members’ integrated, differentiated, or fragmented BUAs were possibly associated with their use of risk management. Organisation B was perceived to have a strong controlling risk culture and weaker goal-oriented, collaborative and innovative risk cultures. A greater controlling environment with its characteristic formalisation and conformity to rules, which embeds risk management into core operational processes as part of an audit and quality control approach, appeared to influence members’ BUAs in one of two ways: either they were not aware of undertaking risk management in their jobs or they considered risk management to be a box-ticking exercise. The focus on predictability, dependable delivery and stability also hindered members from attempting responsible risk-taking or trying innovative approaches to managing risk, resulting in a culture of risk aversion.
Participants commented that Organisation B had the standard formal risk mechanisms as well as a small number of informal mechanisms, which members did not use frequently but that were perceived as being helpful for managing risks. Informal risk mechanisms, such as risk conversations and meetings, helped members to understand risks in a job-relevant context and to consider a wider range of options and the impact of their decisions on the organisation. Informal risk assessment enabled members to continually monitor operational situations as they developed. Since these risk mechanisms influenced the use of risk management, participants suggested that Organisation B could improve the characteristics or quality of its risk mechanisms, such as its risk champions forum, to change members’ thinking and to help them manage risks more effectively.
Chapter 7: Stage 2—Organisation C’s risk culture and risk management

7.1 Organisation C: Background

Organisation C is an Australian national security and law enforcement agency, which ensures the safety of Australians and Australia’s interests in certain fields. The main objectives of Organisation C’s activities are to reduce threats to Australian interests and to maintain a safe environment by providing services to the Australian community. The primary risks arising from Organisation C’s activities are closely related to the safety of staff and the public.

Therefore, managing risk is a key component in Organisation C’s aims and objectives. Organisation C has developed risk profiles and encourages discussion of strategic, business and operational risks and their treatments. Organisation C’s annual report of 2015–16 discloses its risk management framework, which embraces the principles of the Commonwealth Risk Management Policy and other standards. In addition, its annual report emphasises organisational efforts to embed risk management into its operational activities across different functions, including financial management, operations, business planning, resource prioritisation and project management (Organisation C, Annual Report, 2015–16, 2016). While the report outlines many areas in which risk management has been incorporated, it was noted that a number of initiatives tended to focus on formal risk mechanisms, valuing rules and formal guidance in managing risk as well as stronger support for decision-making of executives and senior management.

To deliver effective services to the community, Organisation C highlights the value of taking innovative risks responsibly (Organisation C, Corporate Plan 2017–2021, 2017). In line with this statement, its corporate documents, such as its annual report, corporate plan and other
reviews, reveal the organisation’s efforts to nurture collaborative and innovative risk cultural environments in addition to its compliance-oriented risk management in facilitating decision-making.

7.2 Organisation C: Members’ BUAs and their use of risk management

This section discusses how the BUAs of Organisation C’s members are related to their use of risk management in decision-making.

7.2.1 Organisation C: Members’ BUAs and the purposes for which risk management is used

This section provides an overview of members’ BUAs regarding the usefulness of risk management and the purpose for which risk management is used in Organisation C. A detailed analysis of the questionnaire and interview responses, including statistics and interview quotes, are provided in Appendix 11. Members of Organisation C believed that risk management was most useful for assessing downside risks and for compliance-oriented activities and moderately useful in strategic or operational decision-making, followed by development and implementation of policy and providing advice. Compared with the operator groups, the executive group thought that risk management was more useful in strategic or operational decision-making and for development and implementation of policies or providing advice.

The questionnaire and interview results showed that integrated, differentiated and fragmented BUAs on the usefulness of risk management coexist in Organisation C. Integrated BUAs among participants were found in relation to the usefulness of risk management in compliance-oriented activities. Differentiated or fragmented BUAs were observed in assessing downsides, strategic
or operational decision-making and development and implementation of policy or providing advice.

Assessing downside risks, such as preventing undesirable events or avoiding risky activities, was considered most useful by the operator group because some of their operational activities could result in injury or loss of life. However, the interview findings revealed fragmented BUAs about risk management for assessing downsides across different functions or teams. While members in some areas commented that management of downside risks was useful, others tended not to agree this view and ignore the identification of risks.

Analysis of the interview data showed that fragmented BUAs also existed in risk management of strategic or operational decision-making. Operator groups with different functions had mixed views, with some believing that risk management was useful in making operational decisions in their role, and others considering risk management as nothing more than complying with mandatory processes.

With respect to the use of risk management, participants in Organisation C adopted risk management most frequently in compliance-oriented activities as well as in assessing downside risks. There was a moderate use of risk management in strategic or operational decision-making.

Compliance-oriented risk management was largely adopted to manage and monitor compliance risks by senior as well as middle managers in finance and project management functions. In the assessment of downside risks, some interviewees from operator groups commented that they used risk management for preventing undesirable events. As highlighted in the espoused beliefs and values in Organisation C’s corporate documents, members were strongly encouraged to ensure the safety of all people involved in operational processes. These espoused beliefs and values were deeply ingrained in members’ BUAs, encouraging members to identify and manage compliance and downside risk in line with these beliefs and values.
Interviewees from the operator group also used risk management in strategic or operational decision-making in the fields of operational planning, preparing for external uncertainty and prioritisation of resources. Planning, development and implementation of strategies incorporating risk management principles were also used by participants across the organisation.

7.2.2 Organisation C: Differences between members’ BUAs and their use of risk management

Table 7.1 shows the extent to which members’ BUAs differed from their use of risk management. On the whole, there was no significant difference in risk management for compliance, for which integrated BUAs were observed. Significant differences were found in the other three areas, for which members had differentiated and/or fragmented BUAs. In these areas, there was a reduced use of risk management compared with the use of risk management for compliance.

Table 7.1 Difference between members’ BUA and their use of risk management

<table>
<thead>
<tr>
<th></th>
<th>BUA Mean (SD)</th>
<th>Use Mean (SD)</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>3.72 (0.93)</td>
<td>3.63 (1.04)</td>
<td>0.418</td>
</tr>
<tr>
<td>Assessing downsides</td>
<td>3.75 (0.90)</td>
<td>3.42 (0.94)</td>
<td>&lt; 0.005**</td>
</tr>
<tr>
<td>Making strategic or operational decisions</td>
<td>3.58 (0.88)</td>
<td>3.21 (0.93)</td>
<td>&lt; 0.005**</td>
</tr>
<tr>
<td>Development and implementation of policy or providing advice</td>
<td>3.46 (0.89)</td>
<td>3.06 (0.92)</td>
<td>&lt; 0.005**</td>
</tr>
</tbody>
</table>

*Wilcoxon signed-rank test—exact Sig(2-tailed)
**p < 0.05

Usefulness scale: 1: Not at all; 2: Slightly; 3: Moderately; 4: Very; 5: Extremely
Frequency of use scale: 1: Never; 2: Occasionally; 3: Sometimes; 4: Frequently; 5: All the time

Despite members believing that risk management was useful in assessing downsides, the use of risk management for this purpose did not reflect its perceived usefulness. This could be the
result of fragmented BUAs as evidenced by members’ risk aversion and risk blindness. With respect to these fragmented BUAs, risk aversion drove members to avoid risk, irrespective of the available information, rather than to accept and manage it, while risk blindness resulted in members failing to identify or even acknowledge the existence of risk. In these cases, the use of risk management was less likely to occur consistently across the whole organisation:

[I]t depends on the manager. Because some would be happy enough to go, ‘Alright, yes, we have all this information, we have enough information to make that decision to write it off and we are happy to wear the risk. But something else might pop up that will change that decision, we will change it later’. Whereas other people are like, ‘Oh no, we need to keep that job on the books in case this happens and in case this happens’. So, and I have had jobs like that with two different [middle managers] where one [middle manager] wasn’t willing to write it off and next [middle manager] came in, happy to write it off. (Organisation C, Operator Group 6)

The use of risk management in strategic or operational decision-making was also, at times, rejected by members because of their fragmented BUAs. Since members did not consider risk management to be useful in their everyday decision-making, they sometimes resisted the risk management process because they considered it a hindrance to ‘get[ting] the job done’:

[M]embers actually doing the job have no time for that [risk management]. They are too busy doing whatever they are doing. (Organisation C, Operator Group 7)

Risk management is perceived as not useful, but an administrative exercise [for operational members]. They do not use it [in carrying out their duties]. (Organisation C, Executive Group 2)

I think that part of culture problem around, ‘Oh, risk management, I have to do it’ has come from the fact that that process [risk management] they see as slowing down what they want to do. (Organisation C, Executive Group 6)

Fragmented BUAs also influenced the use of risk management across different functions and teams. Operators in corporate areas argued that operators in the primary operational areas had a poor understanding of risk management because they focused more on hierarchy and controls
than on proposed risk treatments. Participants from the primary operational areas criticised corporate operators for not having a proper understanding of their needs:

[T]here is probably a difference in an understanding of the key parts of the business which are important and why they are important to different members. (Organisation C, Operator Group 9)

[I]n the operational areas, I think it [an understanding of risk management] is quite poor ... you have, again being a [hierarchical] and structured organisation, you know you have certain, a person at certain level just say, ‘No, we are going to do this’. Then of course no one questions it. They just do it. (Organisation C, Operator Group 4)

I think there is [a division] sometimes between very operational aspects versus a lot of the corporate ... we have talked about the need for that cross pollination between the corporate side and operational side. (Organisation C, Operator Group 6)

Participants proposed that the gap between what members do daily and their concepts of risk management needed to be bridged. Some operational members were not aware of themselves managing risks in undertaking daily operations or projects and considered risk management to be nothing more than a documentation exercise. Nevertheless, members informally conducted risk management because of the integration of risk management into their operational processes and training. Hence, participants believed that the organisation should make more of an effort to establish the link between risk management practices and their operations:

I think it is bridging the gap between what people do daily and risk assessment. (Organisation C, Operator Group 1)

What is missing is the link between formal documents that have stories and risk management concepts in them. (Organisation C, Operator Group 3)

Participants suggested that a ‘fit-for-purpose’ risk management approach, which is recommended by public sector regulators (ANAO, 2011; Department of Finance, 2014), may nurture the BUA that risk management is useful to members in their jobs. One participant proposed that members needed to understand the purpose of risk management in solving
problems in a particular operational setting. Risk management, therefore, was recommended to be tailored or customised to individual tasks:

_I think that breaking away or creating over time more distance between compliance mechanisms and formal nature of some of the way we do risk will enable our risk culture to become more essential, less seen as a requirement, ‘You know I have to fill this form in’ or ‘I have to fill in this template’, always rail against the processes that are reduced down to ‘I have to do this’._ (Organisation C, Operator Group 5)

Participants also suggested that the risk awareness and understanding could be enhanced organically. According to some executives, members in the organisation could be encouraged to ‘become more comfortable with managing risk more proactively’ (Organisation C, Executive Group 1) and to ‘engage and understand risk in a professional context’ (Organisation C, Executive Group 5). Some operators supported this view—they believed members could do their jobs better by understanding the benefits of risk management and the rationale behind the risk management elements incorporated into operations:

_I think their lives will be easier if they were able to understand the decisions that they make on a daily basis and how that fits into those bigger risks or those bigger objectives and goals. ... if the general membership of the population, general population understood, if they understood better what the executive was thinking and why [the executive was thinking in that way] in the risk space, I think it would actually help to drive some of the decision-making at all levels._ (Organisation C, Operator Group 9)

To enhance the level of risk awareness and understanding among members, interviewees proposed that risk management could be used as a tool to empower members by giving them more responsibility and delegation in managing risk. This belief that risk management could be used as an empowerment tool accompanied two essential concepts: first, members should be accountable and take ownership of risk; and second, greater responsibility for risk should be supported by formal training and guidance:

_‘Go and explore’ because there could be some benefits in that. We will give you that licence to do it. And that, I think, will help people ready to_
find their own minds or their relationship with risk. (Organisation C, Executive Group 5)

Other recommendations to enhance BUAs about risk management in strategic or operational decision-making included reducing risk-averse behaviours, increasing the confidence of executives and senior managers in members, understanding the BUAs held by other functions or teams and conceptualising risk in areas other than downsides.

In summary, there was a significant difference between the BUAs about the usefulness of risk management and its actual use by members in the areas of assessing downsides, making strategic or operational decisions, and in the development and implementation of policy or providing advice. These differences could be driven by differentiated or fragmented BUAs of operators, which were related to the reduced use of risk management. Participants suggested that members’ BUAs could be influenced to facilitate a greater use of risk management in performing their jobs. In the next section, the composition of Organisation C’s risk cultural environments and its effect on members’ BUAs and their use of risk management are explored in detail.

7.3 Organisation C: The effect of risk cultural environments on members’ BUAs and their use of risk management

This section focuses on the composition of risk cultural environments in Organisation C and how they influence members’ BUAs and their use of risk management for different purposes.
7.3.1 Organisation C’s risk cultural environments

This section provides a summary of Organisation C’s risk cultural environments (see Appendix 12 for a detailed analysis). Figure 7.1 illustrates the current and preferred composition of the risk cultural environments. Members of Organisation C perceived a stronger presence of the controlling and goal-oriented risk cultural environments, given the strong focus of the organisation on conformance and outcomes.

Figure 7.1 Organisation C’s composition of the risk cultural environments

Interviewees described Organisation C as being primarily oriented towards a controlling environment, with a number of governance and administrative arrangements, a formalised hierarchy and structured rules. In many cases, participants noted that this conformance-focused
cultural environment overwhelmingly led members to consider risk management as a compliance activity. With respect to the goal-oriented risk cultural environment, most interviewees agreed that organisational members were moderately influenced by a goal-oriented environment when managing risks.

The collaborative environment constitutes a smaller proportion of the organisation’s risk cultural environment. The sharing of risk information occurred only in certain situations, such as risk reporting within a specific project, while effective cooperation and participation in managing risk happened only sporadically. Some members pointed out that, in some cases, risk management collaboration was a ‘forced’ or ‘facilitated’ exercise. Many members agreed that their environment did not show the characteristic of support in managing risks. More than half of the interviewees agreed that the organisation, as a whole, preferred to retain the traditional ways of managing risk, although the aspiration of being innovative had been continually expressed by executives and senior management. Members stated they would prefer an increased level of collaboration and innovation and a decreased level of control and goal-orientation.

7.3.2 The effect of Organisation C’s risk cultural environments

The section discusses how the composition of Organisation C’s risk cultural environments affects members’ BUAs and their use of risk management. While each risk cultural environment influenced members’ BUAs and their use of risk management differently, it was also found that the interplay between these cultural environments affected BUAs and the use of risk management.

Table 7.2 summarises the extent to which members agree on the effect of the risk cultural environment. On the whole, members believed that, compared with other risk cultural
environments, a collaborative risk cultural environment helped them to understand their colleagues BUAs, to manage risks in decision-making and to enhance their belief that risk management is useful.

Table 7.2 Effect of the risk cultural environment

<table>
<thead>
<tr>
<th>Environment</th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>A collaborative environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.66 (0.96)</td>
<td>4.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.93 (0.86)</td>
<td>4.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.90 (0.83)</td>
<td>4.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.86 (0.90)</td>
<td>4.00</td>
</tr>
<tr>
<td>An innovative environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.44 (0.95)</td>
<td>3.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.64 (0.83)</td>
<td>4.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.57 (0.91)</td>
<td>3.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.54 (0.86)</td>
<td>3.00</td>
</tr>
<tr>
<td>A goal-oriented environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.47 (0.95)</td>
<td>3.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.54 (0.92)</td>
<td>4.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.62 (0.96)</td>
<td>4.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.55 (0.94)</td>
<td>4.00</td>
</tr>
<tr>
<td>A controlling environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.40 (1.23)</td>
<td>4.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.07 (1.15)</td>
<td>3.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.38 (1.09)</td>
<td>3.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.09 (1.20)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

As discussed in the previous section, Organisation C has a strong controlling risk cultural environment, which appeared to promote fragmentation of members’ BUAs. The focus on controls and structured rules meant that members who strongly believed in rules conformed to formalised expectations of what they could do and could not do. The rule-based characteristics of the controlling environment also helped Organisation C to embed risk management elements into its operational processes and training:
Risk management of members out [on fields] is through the training. That is where risk management comes from. More training, more information that they are able to experience, skills that they develop, those increase their [mental] risk evaluation models. (Organisation C, Operator Group 7)

In contrast, the controlling risk cultural environment discouraged other members from positively developing BUAs about the usefulness of risk management in their daily decision-making, resulting in insincere attitudes and behaviours or paying lip-service to risk management. The following are responses to questions about how the environment affected members’ thoughts about risk management:

So, people don’t have a lot of say in how it is done. They just get told ‘It was this way, now it will be this way’. People have to adopt to the changes. (Organisation C, Operator Group 1)

We only think about to discuss it when we have to. ... we ran our business continuity discussion exercise and it is all about risks. But I can tell you now we only had a look at it twenty minutes before the meeting. (Organisation C, Operator Group 5)

In some cases, risk management under the controlling risk cultural environment was perceived as the equivalent of formal risk documentation mechanisms, such as risk assessment templates. This assumption was pervasive in some operational members’ BUAs about certain functions in that they were not aware of themselves managing risk on a day-to-day basis and believed they undertook risk management only when they had to complete templates:

Risk culture and management is embedded within my organisation in a way that it is automatic/business as usual activities. (Organisation C, Operator Group C16)

[O]ur frontline operational members trained and practised in a relatively light way in terms of the documentation, but if we have got a general duty out on the street, they are almost constantly making that threat risk assessment of what is happening ... I think for the organisation drills that [risk assessment embedded into training and practices] into people to a point where they might not use the language of risk management, they might not use the documentation of risk management, but they are, I think, very strong risk managers in the day-to-day delivery of the operation. (Organisation C, Operator Group 10)
One participant from the executive group highlighted that, in some cases, certain risk management efforts originating from a controlling risk environment may have missed an important objective, resulting in risk management being considered ineffective. For example, members who wished to purchase equipment for work health and safety (WHS) purposes considered risk management less helpful by making members to focus on side issues because the rules and templates of risk assessment are built solely around administrative and financial checks and balances, instead of focusing on real WHS issues that members may face in certain situations.

Standardisation, formalisation and conformity to rules and controls also contributed to members’ BUAs that generic risk management was not useful in performing their jobs because it lacked relevance and the documentation requirements were onerous:

\[*\text{hey [generic risk profiles] are too far away from operational members in terms of the contexts ... having somebody way up here in this building tell a [operational officer] that this is the risk profile, it would be deleted. I can guarantee not one person would read it.} \text{ (Organisation C, Operator Group 7)}\*

\[*\text{it is a bit one size fits all. It is not clear that it is useful. It can be laborious because it is too big for the job that you are actually doing.} \text{ (Organisation C, Executive Group 4)}\*

Another effect that characteristics of a controlling environment, such as hierarchy and siloing, had on the use of risk management was to induce members to avoid dealing with risk by simply transferring it vertically or horizontally across the organisation. One participant raised the concern that formal structures and hierarchies would lead to members transferring risks to their superiors rather than taking responsibility for them. This transfer of risks also occurred between different functions in the organisation when a function or team did not want to share ownership of risk:
Transfer the risk. If I am giving it to you as my supervisor, I transfer that risk to you. But we use it [hierarchical structure] for that. And it is not the way it should be used. (Organisation C, Operator Group 7)

[ ]t is really true of [the organisation’s main operation] that typical structure in a [the organisation’s main operation] organisation is to divide [main operation] into [subcategories of the main operation]. And in a way you know that continues through the organisation, IT, finance and so on, right? So that structure, you could say, I think, a way to transfer a risk. ... If there is an issue with a failure of [a subcategory of the main operation], well, over to you, that is your problem. (Organisation C, Executive Group 5)

With risk avoidance or transfer, some interviewees and participants in the questionnaire survey criticised certain members’ BUAs that encouraged the defensive nature of risk management:

Because the biggest risk in this building is reputational risk. That is what they see. ... it is reputational risk for the individual, for the business area, for the supervisor, for everyone. Everyone really focused on the reputation of the organisation, not personal, general reputation. (Organisation C, Operator Group 7)

Risk is not used to identify opportunities or to work collaboratively; it is used as a tool more so after the fact as a tool to say we did one. (Organisation C, Operator Group C30)

Our risk management systems ‘wag the tail of the dog’ and appear to frustrate real analysis of risks, threats and opportunities. (Organisation C, Operator Group C49)

Risk analysis is driving a culture of do nothing, break nothing. (Organisation C, Operator Group C109)

However, one participant raised the point that a controlling risk cultural environment encouraged members to use risk management as they were required to do, even though some members may not agree on its usefulness. This explained why risk management was mainly adopted in compliance areas:

I think you have to. In an organisation like this [a rule-oriented and hierarchical environment], if you tell people it has to happen, it happens. If you don’t tell them that it has to happen, it generally doesn’t happen. So, I think at least you get so far, it doesn’t mean it is going to be useful, but at least they will do it. (Organisation C, Executive Group 4)
A goal-oriented risk cultural environment also influenced the use of risk management in Organisation C. Some members pointed out that the definition of performance in the organisation had changed as Organisation C’s focus had shifted towards encouraging members to consider a broad range of goals when managing risk. In the past, performance of members and teams had been primarily determined by quantitative measures, such as the number of successful operations. The current definition of performance had broadened and now encompassed a wide range of criteria, such as minimal disruption to general stakeholders; thus, the organisation now managed a broader range of risks in achieving its more diverse goals through its decision-making in everyday tasks:

[I]t is understanding the risk and then working out the best when I think of performance. I guess our picture of performance has changed substantially so, whereas previously performance was about [the number of output-focused actions], now we have other performance things like disruption and things like that. ... Well, if we go down this path, there is a lot of risks associated with that. However, this path might be less risky and just as effective. (Organisation C, Operator Group 6)

[W]e, in some respects, need to, maybe, shift what we value a bit and with a tradition as an operational agency, it has led to a tradition of valuing the outputs of our [operations]. ... as our threats become more complex, those measures have less value. So, we have to sort of shift to a value proposition that is less about those output, less about quantities and more about problems and problem-solving and impact of problems. (Organisation C, Executive Group 5)

Despite the inclusion of a broader spectrum of goals when managing risk, participants believed that the goal-oriented risk cultural environment in Organisation C could be problematic because it influenced the use of risk management in two undesirable ways. First, there could be a disconnect between teams or functions when managing risk was apparent. According to one participant, various projects could be implemented within one organisational silo to fulfil the separate agendas of individual teams, rather than integrating projects to meet the strategic goals of the organisation:
It [a goal-oriented risk cultural environment] happens at a moderate level with projects. There is a formal risk assessment piece. ... it is done in isolation to those goals instead of trying to link it to the rest of the risk profile. (Organisation C, Executive Group 2)

Unless there is a conversation around it, [some] people will do it in isolation and therefore may consider their particular project zero-risk, all going great. The fact there are huge risks to another program, nobody picks up because there is no conversation. ... in isolation we look at things but we don’t look at the combination effect of something, which I think is where maybe the organisation needs to mature towards that. (Organisation C, Executive Group 2)

[What I would observe is that there are sometimes a lack of connectivity or coherency the way in which we apply risk assessment treatment plans at different levels or different parts of our process. ... for the organisation, the most significant risk for the last few years has been technology related risks. But consciously, as an organisation, we saw those risks as the responsibility of the area that looked after technology. So, we were not actually conscious that they are enterprise risks, it is an enterprise domain. (Organisation C, Executive Group 5)

The second problem arose from a lack of sustainable goals and its effect on the use of risk management. Some interviewees conceptualised a sustainable risk cultural environment in which long-term goals were valued over short-term achievements when managing risk. The participants thought that Organisation C needed to encourage longer term goals when members prioritised risk and devised risk treatments:

A lack of sustainable goals is also an issue. The organisation thinks a program is done and dusted when the program is developed and the organisation considers it finished. There is no discussion about a lack of funding in the future for continuing the program. There are always risks of not getting money from the government, but we do not talk about it. If money runs out, then we worry when it happens. We need to think more and educate more about risk management with sustainable goals ... sustainability in a long-term duration is important in risk management... (Organisation C, Operator Group 3)

Since the collaborative risk cultural environment was perceived to be insignificant, only a small number of participants discussed the effects of the collaborative environment on the use of risk management. Some middle managers stated that they were more inclined to discuss risks with
colleagues than other managers and felt that they facilitated risk management through discussion and participation:

*I certainly don’t think that it is not participative. ... it is in the early stages of being participative. ... We, in particular colleagues and I, are probably more likely talk to about risk than maybe some other areas.* (Organisation C, Operator Group 10)

Despite the smaller collaborative risk cultural environment, participants thought that sharing information on different risks and their associated contexts was important for risk management because risks could be pervasive across the organisation. They believed that a collaborative risk cultural environment would result in a better use of risk management, including developing better risk treatments or broader learning experiences. To illustrate this, one interviewee provided an example of sharing information that led to a discussion on whether a particular risk treatment was appropriate for a problem, confirming the intended effectiveness of the treatment:

*You need to be joining up those dots because it was quite useful for us to sit down and think with [our team members] and that people [other team members] would say, ‘Oh, we have got these sort of mitigation strategies in place’. [Our team members respond], ‘Actually they [the aforementioned risk mitigation strategies] are useless to deal with that [risk]’. (Organisation C, Operator Group 8)*

Interviewees noted that a collaborative risk cultural environment would facilitate the use of risk management because of the interconnection of risk management between different teams or functions. They thought that interconnection should be considered when members developed and implemented risk treatments. An environment that encouraged consideration of this concept would make the use of risk management more effective because the complexity of contemporary problems required insight from different functions or teams:

*[W]e will articulate that [risk treatment], as part of the mitigation strategies, is not just ours. They [risk treatments] belong to other people as well. So, I think that is very important and making sure that where we articulate the mitigation strategy that belongs to somebody else, that is picked up in their plans as well. I don’t know that [risks and their mitigation strategy is also picked up in relevant teams] actually happens*
but thinking it through now, that would be very useful for them to realise that actually, you own this one as well. (Organisation C, Operator Group 8)

With respect to the innovative risk cultural environment, because of its weakness in the organisation, participants wished to have a greater degree of this environment for its potential effect on members’ BUAs:

*I think we have to become more accepting of risk ... we probably have to get better at being more risk embracing and using risk as a way to develop new partnerships and new ways of doing things.* (Organisation C, Executive Group 1)

*While the senior executive encourages a positive approach to risk, in practice, this is not how middle management work. Possible negative consequences of activities dominate, overriding the talk of supporting innovation and risk-taking. Some of this is the compliance/regulatory environment, other aspects are avoidance of negative outcomes.* (Organisation C, Operator Group C108)

With respect to the concept of embracing risk for its positive effects, members believed that an innovative risk cultural environment could lead to a change of members’ BUAs towards the usefulness of embracing and managing risk and would enhance the view of risk management as an opportunity:

*[The risk management function] hasn’t looked at how we can get people to understand the opportunity side of risk. But the organisation wasn’t quite ready for that yet. But it is certainly something that is in our minds.* (Organisation C, Executive Group 6)

Members also noted that an innovative risk cultural environment needed to be nurtured to a greater degree so that risk management could be used in achieving Organisation C’s goals:

*I think that [an innovative risk cultural environment] is absolutely integral to our being successful in the future.* (Organisation C, Executive Group 1)

To foster an innovative risk cultural environment, members across the organisation highlighted the need for a safe, blame-free environment in which members could learn from their mistakes.
A number of participants believed that the organisation needed a safe environment for responsible risk-taking, enabling members’ use of risk management in daily decision-making:

One of the biggest things I think we could improve to encourage that risk-taking culture, responsible risk-taking culture would be around not blaming people for their mistakes. ... they should be able to learn from that and not be overly punished for that. I think that is a big element of addressing a risk culture. (Organisation C, Operator Group 2)

There is a lot of, a bit of blame game happens. So, I think if we want to encourage people to be less risk averse, we have to do less of the blame game. ... Accept that for what it was because if you are trying to encourage innovation, you can’t blame people when they fail. Perhaps less of that in our culture will help people to be less risk averse and be more innovative. (Organisation C, Operator Group 8)

At times, the constant effort to balance the four different risk cultural environments resulted in fragmented BUAs. For example, one participant commented on the conflict in BUAs arising from the discord between the controlling and collaborative risk cultural environments—the controlling environment, resulting in the BUA that risk management was not effective in daily decision-making, negated any positive influences on BUAs arising from the collaborative risk cultural environment:

I think ... those elements of our risk culture that dragged into the compliance mentality don’t help. And I think they sort of balance out and, kind of, neutralise the relatively positive participative elements of the culture. So, I think they are sort of a bit of balancing between the two. That means that the risk culture itself, as a background kind of thing, neither improves or negates the effectiveness of risk management. (Organisation C, Operator Group 10)

The use of risk management under a prevailing controlling environment was inconsistent with its use under an innovative environment. Organisation C had continually encouraged innovation and risk-taking, which was evidenced by its espoused beliefs and values found in corporate documents (Organisation C’s Annual Report, 2015–16; Organisation C, Corporate Plan 2017–2021) as well as comments from interviewees:
Innovation is being encouraged, which means that we have to take more risks... (Organisation C, Operator Group 6)

The CEO is asking people to step up a bit in terms of innovation. (Organisation C, Executive Group 4)

In contrast, because of its controlling risk cultural characteristics, certain BUAs that were deeply ingrained in the organisation led to feelings of disempowerment in cultivating an innovative environment. Members in the organisation placed a high importance on hierarchy, structures and rules and were concerned that they could be a target for blame if they attempted to be innovative. One senior manager observed the conflict experienced by members when they were encouraged to be innovative but were simultaneously limited by the prevalent controlling characteristics, such as the organisation’s rule-oriented and hierarchy-based approach:

With [hierarchy] and control, I find people are caught between two worlds. If they are asked to innovate, they sort of want to do so, but they are in a hierarchical structure, so they are used to following orders. So, for the [operational] members of our workforce, I think that is a bit of tension and I don’t have the answer for how that works. (Organisation C, Executive Group 4)

One operator had a similar comment:

So, my concern is that when you have a lot of governance and a lot of prescriptive documents to deal with these types of issues, that it can stop people thinking outside of the square, thinking about different ways to achieve the objective and treat the risk. (Organisation C, Operator Group 2)

Because of these conflicts, many participants articulated the need for the organisation to cultivate an environment that encouraged greater flexibility, freedom, agility and adaptability for members in assessing risks and formulating treatments for those risks. For example, some members believed that an environment that encouraged flexibility in achieving goals could help members manage risks in different situations:

We do need to get more agile. In terms of our management and leadership, in some scenarios, [we should have] less risk, more tightly managed, in other scenarios, [we should have] high acceptance of risk,
accepting that mistakes will be made and people need to learn from that so long as life isn’t put at risk. (Organisation C, Executive Group 1)

Not just working in that top-down mode. Working in that mode too [drawing a horizontal line]. ... that notion of ambidexterity [members being adaptable for different situations in managing risk]. (Organisation C, Executive Group 5)

Members were aware of the negative effect of Organisation C’s strong controlling risk cultural environment on their BUAs and their use of risk management. The inconsistent demands arising from different environments also created fragmented BUAs because of mixed messages about the usefulness of risk management. Although collaborative and innovative risk cultural environments were not prominent in the organisation, members appeared to value its potential effects on their BUAs and their use of risk management.

The following section discusses the formal and informal risk mechanisms and their effects.

7.4 Organisation C: Risk mechanisms and their effects

This section explores the formal and informal risk mechanisms used in Organisation C and members’ perceptions on the usefulness and their use of these mechanisms. The effects of risk mechanisms on Organisation C members’ BUAs and their use of risk management are also analysed.

7.4.1 Organisation C’s risk mechanisms

This section discusses members’ perceptions on the helpfulness of the risk management mechanisms and their actual use. A detailed discussion, including descriptive statistics and interview quotes, is provided in Appendix 13. The questionnaire and interview findings revealed that participants considered informal risk conversations, risk management frameworks,
risk management role models, informal meetings, brainstorming and networking to be helpful—many of these mechanisms are associated with managing risk informally.

Participants from the executive group placed the highest value on formal risk workshops, followed by informal brainstorming sessions, discussions outside of meetings, informal networking with relevant risk management stakeholders and informal risk management meetings. Interactions arising from the use of informal risk mechanisms were considered helpful by the executive group in the course of undertaking tasks.

Respondents from the operator group responded that discussions outside of meetings on risk management were helpful, followed by visual presentations of risks, such as risk maps and risk matrices, and learning from risk management role models. Many interviewees indicated that risk management role models were important because the organisation’s members placed greater value on informal learning from and work experiences with these role models. In particular, many participants mentioned that operational members tended to manage risk informally because of their prior experiences in the field and intensive training.

In relation to the use of risk mechanisms, there appeared to be a balance between the use of formal and informal risk mechanisms. Nevertheless, for decision-making purposes, operators frequently mentioned that, because of their prior experiences in operational settings, they tended to use informal risk mechanisms such as risk conversations, informal risk assessment and knowledge and skills to manage risks.

Similar to Organisation B, the risk management function in Organisation C comprised ‘independent overseers’ (Kaplan and Mikes 2016, p. 11), who primarily focused on establishing and reviewing the risk management framework and collating risk registers to report to executives and senior management.
7.4.2 The effects of Organisation C’s risk mechanisms

Table 7.3 shows that formal and informal risk mechanisms have a moderate effect on members’ thinking about risk management and managing risk.

Table 7.3 Effect of risk mechanisms

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal mechanisms (systematic, structured mechanisms) help me to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.30 (1.14)</td>
<td>3.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.09 (0.95)</td>
<td>3.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>3.68 (0.94)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms (unwritten, implicit, or casual mechanisms) help me to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.10 (1.01)</td>
<td>3.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.30 (0.96)</td>
<td>3.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>3.50 (0.93)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Formal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.34 (1.10)</td>
<td>3.50</td>
</tr>
<tr>
<td>• are more important in risk management than informal mechanisms.</td>
<td>3.25 (1.16)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.38 (0.94)</td>
<td>3.00</td>
</tr>
<tr>
<td>• are more important in risk management than formal mechanisms.</td>
<td>2.87 (1.06)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>I think both formal and informal mechanisms are equally important in risk management.</strong></td>
<td>3.39 (1.13)</td>
<td>3</td>
</tr>
</tbody>
</table>

Scale: 1: Strongly disagree; 2: Disagree; 3: Neither disagree or agree; 4: Agree; 5: Strongly agree

Members believed that certain informal risk mechanisms, such as risk conversations, were helpful in their use of risk management because they facilitated understanding and collaboration between team members. For instance, some middle managers stated that they included risk messages in their discussions, illustrating that they attempted to manage risks through team efforts and collaboration:

[Risk] conversation is a good one. I mean a lot of the decisions that I make generally I am having a discussion with the [team leaders] about
what they are proposing to do, getting an understanding of what they are doing and we sort of work together on which way it should go. (Organisation C, Operator Group 2)

In addition, risk conversations influenced the use of risk management because they could elicit a range of thought-provoking ideas and enabled members to think about the wider implications and options for managing risk.

Because you are getting more perspectives and understanding where other risks might lie that you might not think of it as an individual. (Organisation C, Operator Group 6)

[C]onsider that whether actions that you are taking are actually appropriate mitigation strategies. And what else is happening outside of your control, you might have to link into other people to see if you got the coverage there. (Organisation C, Operator Group 8)

Informal risk mechanisms influenced members’ BUAs because they helped members to understand why risk management is important and useful in certain situations:

[W]e are very operational[ly]-focused. ... We just want to go and do it [a core operation] whereas it [risk management] is all the admin side of things. I think it is a lack of understanding around the benefits of it [risk management] and how it can be used to help you. (Organisation C, Operator Group 5)

[H]elping them to understand why it [risk management] is important. ... just [risk] conversations and showing them the relevance of it (Organisation C, Executive Group 2)

Other attributes of risk mechanisms that appeared to influence members’ BUAs and their use of risk management included being able to use a particular mechanism for multiple purposes, guiding members in certain directions for managing risk, establishing and communicating expectations of executives and senior managers, enabling members to focus, increasing accountability, being able to monitor checks and balances of a certain activities, and enhancing a shared understanding of risks.

In contrast, participants discussed the reason for the perception that some mechanisms used in Organisation C adversely affected their BUAs and their use of risk management, pointing out
that certain formal mechanisms, such as risk assessments and risk registers, prevented them from doing their jobs. Some risk management practices were seen as a deterrence to undertaking urgent operations:

*I think I don’t have to write all this stuff down, but I just do it in the daily job.* (Organisation C, Executive Group 3)

*[T]hat process [risk management] they see as slowing down what they want to do* (Organisation C, Executive Group 1)

*Risk plans are far more reactive than proactive to issues. It is also apparent that the org does not learn from past mistakes and the risk framework does not include history. It is all here and now. It is also apparent that risk management is seen as a burden, not a tool to [operational members]*. (Organisation C, Operator Group C30)

Other attributes of formal mechanisms that hindered the use of risk management included them being ambiguous and open to interpretation, as well as their box-ticking, generic natures:

*I think part of the problem we have when we force people down to certain line with our [operational] planning is it stifles their freethinking and it leads to a bit of pro forma approach to things instead of actual assessment and treatment of actual risk for that particular [operation]*. (Organisation C, Operator Group 2)

*[I]t is very open to an interpretation, [it can be] misunderstood. Having used them before, I know how to go about it [a risk assessment] but I have seen the other members try to use, it says lots of bright colours and squares and you talk about likelihood and consequences, you talk about source of risks and impact and they are not really understanding what is the impact.* (Organisation C, Operator Group 5)

*Tools are onerous and lacking related, effective software tools compounds this view [risk management not being useful] and approach [using risk management less]. I’ve found that to make [risk management] relevant to people, training and tools must be relatively simple and relevant to their immediate roles and priorities. Otherwise, they see it just as esoteric and a formality, and don’t take the opportunity to get the most from it.* (Organisation C, Operator Group C10)

*The risk management framework has changed little over the past four years. Risk plans appear to be cut and paste from previous years with little through gaining into their development. Risk plans are completed and put away until they need to be updated.* (Organisation C, Executive Group C84)
Participants recommended various mechanisms to encourage favourable BUAs about the usefulness of risk management and to promote the use of risk management. These included role modelling by middle management; the use of risk champions or community practice; knowledge sharing and education; support from senior management; engagement with external stakeholders; stories about successful risk management and its effect on value creation; tailored mechanisms relevant to members’ jobs; and streamlined and simplified risk mechanisms.

Role modelling of risk management by middle management was proposed as one way to influence members’ BUAs. A number of participants thought that risk management in decision-making could be informally implemented through the persuasion of influential members in the organisation to model the activity. Examples of influential members included middle managers and team leaders in operational functions. It was believed that middle managers were equipped with long-term knowledge and skills because of their prior experience and had the ability to incrementally direct their team’s BUAs in a desirable direction, in this case, towards more integrated BUAs that risk management was useful in daily decision-making:

*If you could get out to the team leaders and [middle managers], ‘This is a risk. Because it was identified, we did this’. Well, it fixed something. You know, so it is seen as a way of fixing things rather than as a way of an administrative purpose.* (Organisation C, Operator Group 5)

Members from both the executive and operator groups supported the view that middle managers could influence junior members through role modelling as well as influencing their superiors. In other words, middle management could function as a bridge between the upper and lower levels of the organisation to embed the desirable espoused beliefs and values into members’ BUAs:

*If they [team leaders’] levels, so it is very appropriate to their levels. So, they are team leaders ... so they are starting to actually have a lot more influence up the line. ... we need you [team leaders] to consciously think about risk and to model the behaviours and escalate risks where it needs to be escalated and just actually start applying that risk...*
management innate behaviour more openly. (Organisation C, Executive Group 6).

I would say team leaders and then [middle managers] ... they are going to be most effective at articulating risk and risk culture and risk understanding... (Organisation C, Operator Group 9)

Networking efforts, such as risk champions or community practices, were considered to influence the use of risk management. These types of mechanisms were thought to be potentially helpful in increasing the understanding of the use of risk management across different functions and levels of the organisation. Personnel in risk networks could potentially be more accessible than the small number of experts in the risk management function and could relate risks and their treatments to specific functions or teams:

[C]hampions of risks in portfolios. Like legal, for example, legal has a people-dedicated, HR and finance gone that way. So, I will have a person dedicated to [a specific team] whatever, all these areas ... [champions of] risk, people assign them to the team and come in to the area. ... It goes ‘I am here so with your risk assessment for your operations ... your BCP [business continuity planning], let me help you to think about other ways to doing it’. (Organisation C, Operator Group 5)

Some participants believed that education on the usefulness of risk management was needed to address differentiated or fragmented BUAs and, in particular, to increase awareness among members that their routine tasks already encompass risk management and how risk management can help them to achieve their goals:

[T]hey come from sensitive information that don’t get communicated. So, a lot of the outcomes are, you know something changes, ‘OK, we are now going to do this’. But I don’t think there is enough [about] this is ‘why’ [we are going to do this]. They don’t see that there has been the risk [that was] assessed, there is now a new threat, and we need to put another layer of the security. I don’t think how we got there is communicated well enough. (Organisation C, Operator Group 4)

[T]he executive needs to be able to articulate why the things that they are focused on is most important and how that focus on those important things will help the people, our team members or team leader level, the people on the floor, how it will actually help them to achieve the things that they say is important. (Organisation C, Operator Group 9)
More just talk about how we might already utilise the risk management strategies in our own business and how can them make a bit more aware of the things that they probably already do and what purpose it serves. (Organisation C, Operator Group 8)

In addition, participants commented that many risk management lessons learnt from prior experiences were not shared across the organisation; hence, errors and mistakes made in the past could be repeated. Therefore, it was suggested that lessons learnt be communicated more widely to improve the use of risk management in making daily decisions:

I think they just need that organisation’s assigning someone to say or the managers to say, ‘Give me lessons learnt’ and assign someone and fix it. (Organisation C, Operator Group 5)

Participants also raised the point that greater support and encouragement from senior management and the risk management function was needed. Support from the risk management function would help to develop a consistent and correct approach for enhancing the use of risk management, while support and encouragement from executives and senior managers could help to shape more integrated BUAs of operator groups. Some participants believed that if the executive and senior management group requested risk information from their members, this could help the transition from a compliance-oriented risk management culture to a culture that encourages risk management in decision-making:

[They] have had a couple of years’ experience; [They are] the go-to person for how that works. But you need to actually give those people support, making sure that what they are doing is consistent and correct. (Organisation C, Executive Group 4)

I think it would improve the culture if the rank and file, you called them, actually saw the executives are using the risk process to come to these outcomes. (Organisation C, Operator Group 4)

A small number of interviewees highlighted the importance of engaging with industries and government agencies that had effective risk management practices or complex problems to learn from their use of risk management:
Engaging with industries matters for the program and project delivery.
(Organisation C, Operator Group 3)

We need to work with other Commonwealth partners to work out a better way to deal with this. (Organisation C, Operator Group 6)

Stories about successful risk management and its effect in value creation could also change members’ BUAs. Similar to Organisation B, members from Organisation C tended to regard risk as the effect of potential threats. Interviewees thought that inspiring stories would help members to consider risk management as an activity that is useful in making sound decisions.

Risk mechanisms tailored to suit the purposes of particular teams or functions were considered desirable for the more effective use of risk management. Tailored mechanisms include risk management activities relevant to specific contexts, such as providing specific examples for an operation, workshops for complex projects and operational processes and templates that incorporated relevant risk assessments:

[I]f you can focus it on specific areas, so my division risk assessments come in a different tune of [other function’s] risk assessments. (Organisation C, Operator Group 5)

It just depends on how it is customised for their needs. (Organisation C, Operator Group 9)

In addition, risk mechanisms should be streamlined and simplified to enhance their use in risk management. For example, members believed that a fraud and corruption control plan would have been more useful to them if they had only needed to document core elements. Many members thought that existing risk mechanisms could be simplified without losing their effectiveness. Participants also wished to see improved streamlining of risk mechanisms in other operational processes. For example, the use of a delegation structure to approve risk assessments could be adopted, rather than members having to search for an appropriate delegate for each assessment.
Other desirable mechanisms that could influence members’ BUAs and their use of risk management included the appointment of a formal chief risk officer with whom to discuss strategy, IT systems that would facilitate the flow of risk information, ongoing monitoring of the effectiveness of risk treatments implemented and incentives awarded for desirable risk management behaviours.

In summary, members considered informal mechanisms helpful because they facilitated collaboration and prompted them to think about alternative options. Informal mechanisms also helped members to understand why risk management was important and useful in certain operational situations. Participants also pointed out that certain formal mechanisms, such as risk assessments and risk registers, were perceived by members as preventing them from doing their jobs. Certain characteristics of formal mechanisms, including the focus on conformity to rules, formalisation and standardisation, restricted members’ thought processes and hindered them in their day-to-day tasks. Therefore, many members felt that the organisation should emphasise the role of middle management in influencing members’ BUAs, incorporate networks such as risk champions or community practices, provide greater support and encouragement from senior management and the risk management function, learn from previous risk management experiences and success stories and make risk management mechanisms more tailored, simplified and streamlined.

7.5 Summary of Chapter 7

In summary, the BUAs of Organisation C’s members about the usefulness of risk management were found to be differentiated or fragmented in the areas of risk management for assessing downsides, for strategic and operational decision-making, and for development and
implementation of policy and providing advice. It was also observed that risk management was not used as much in these areas.

The prevailing controlling risk cultural environment and its characteristics of controls, conformity to rules, formalisation, standardisation, predictability, dependable delivery and stability shaped members’ perceptions that such an environment ensured the safety of Organisation C’s members and stakeholders during operations. However, the controlling environment also resulted in certain members’ BUAs that risk management was not useful in decision-making. Rather, risk management was seen as a box-ticking or defensive activity. Hence, some interviewees believed that nurturing a collaborative and an innovative risk culture would help to change members’ BUAs and their use of risk management.

Informal risk conversations, informal risk assessments and application of knowledge and skills gained from prior experiences in operational settings were considered helpful and were used by many members in managing risks in decision-making. Interviewees believed that these mechanisms were helpful in risk management because they created collaboration and stimulated ideas. Informal mechanisms also helped members to understand the rationale behind the importance and usefulness of risk management in certain operational situations. In contrast, certain formal mechanisms were perceived as hindrances to thought processes and completing tasks.
Chapter 8: Stage 2—Organisation D’s risk culture and risk management

8.1 Organisation D: Background

Organisation D is primarily responsible for promoting safety and protection within a particular industry and provides services to certain Australian communities and individuals. The primary services provided by Organisation D encompass a wide range of tasks associated with safety, protection and regulation. Hence, the main risks associated with Organisation D’s core business are around effective regulation of a certain industry and the safety of staff and the public.

Organisation D’s espoused beliefs and values in its corporate documents highlight the importance of risk management. In its 2017–2021 corporate plan, Organisation D articulates risks as part of its planning framework, outlines strategic risks as being an aspect of its organisational challenges and describes how its organisational plans will address them. Organisation D incorporates risk management into its operational decision-making, which enables operational members to detect and assess the level of risks as they undertake tasks (Organisation D, Annual Report 2016–17, 2017). Overall, the terms ‘risk’ and ‘risk management’ were frequently found in Organisation D’s corporate documents and were embedded in their planning and performance reporting areas.

The governance of risk management was outlined in Organisation D’s annual report of 2016–17, which states that the organisation possesses a mature risk culture that is embedded across different levels of the organisation. The report also shows that risk management in planning is performed using both top-down and bottom-up approaches, indicating the attempt to include all levels of the organisation in managing risks. In addition, risk management is also adopted to
reduce the likelihood and consequences of reputational and financial threats when prioritising resources (Organisation D, Corporate Plan 2017–2021, 2017).

8.2 Organisation D: Members’ BUAs and their use of risk management

This section discusses how the BUAs of Organisation D’s members are related to their use of risk management in decision-making.

8.2.1 Organisation D: Members’ BUAs and the purposes for which risk management is used

This section provides an overview of members’ BUAs regarding the usefulness of risk management and the purposes for which risk management is used in Organisation D. Detailed analysis of the questionnaire and interview responses, including the statistics and interview quotes, are provided in Appendix 14. Participants’ BUAs about risk management were that it was most useful for assessing downsides, followed by strategic or operational decision-making, compliance-oriented risk management and development and implementation of policy and providing advice to stakeholders. Overall, there were no significant differences in the BUAs of the executive groups compared with the operator groups across the four categories, indicating that members of Organisation D largely possessed integrated BUAs on the usefulness of risk management in all four categories.

In Organisation D, integrated BUAs were attributed to members having a mature risk culture and understanding the value of risk management. Participants from the executive groups agreed that risk management was useful in their assessments of threats or harms and in strategic decision-making. Some interviewees from the operator group thought that risk management
was either essential or useful for certain purposes, such as planning and prioritisation of operations.

Although the questionnaire survey found integration of BUAs between executive and operator groups, the in-depth interviews and comments from the questionnaires revealed fragmented BUAs within the operator groups in the areas of strategic and operational decision-making when high-level or day-to-day decision-making was required. For example, although some operators thought that risk management was useful in decision-making, certain middle managers considered risk management processes, such as completing risk registers during biannual business planning and review processes, to be ineffective. Similarly, other comments from the questionnaire responses and interviews revealed that a small number of middle managers and their team members had the BUA that risk management was not useful in strategic or operational decision-making and was, rather, a box-ticking exercise.

In terms of the use of risk management, Organisation D’s members used risk management mostly to prepare for potential downside effects of threats and for compliance purposes. Members also used risk management in strategic and operational decision-making.

Participants from the executive group commented that they continually identified and evaluated downside risks in their core operations to find prompt solutions for potential threats. To assess downsides, participants from the operator groups also used risk management to prevent WHS, construction security or reputation risks. Members adopted risk management to comply with internal and external requirements as well as to monitor the level of compliance.

The executive groups used risk management for planning and prioritising and allocating resources for planned activities. Some interviewees from the executive group commented that they frequently used risk management in providing advice to stakeholders, including other
executives and senior managers. Some operator groups also agreed that they used risk management for providing advice to managers.

8.2.2 Organisation D: Differences between members’ BUAs and their use of risk management

The lack of significant differences between members’ BUAs and their use of risk management implies that members of Organisation D have similar views on the perceived usefulness and their actual use of risk management (see Table 8.1).

Table 8.1 Difference between members’ BUA and the use of risk management

<table>
<thead>
<tr>
<th></th>
<th>BUAs Mean (SD)</th>
<th>Use Mean (SD)</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing downsides</td>
<td>4.09 (0.73)</td>
<td>3.86 (0.95)</td>
<td>0.609</td>
</tr>
<tr>
<td>Making strategic or operational decisions</td>
<td>3.83 (0.78)</td>
<td>3.60 (0.80)</td>
<td>0.071</td>
</tr>
<tr>
<td>Compliance</td>
<td>3.70 (1.08)</td>
<td>3.79 (1.05)</td>
<td>0.926</td>
</tr>
<tr>
<td>Development and implementation of policy or environmental scanning</td>
<td>3.66 (0.97)</td>
<td>3.44 (0.86)</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Wilcoxon Signed-rank test—exact Sig(2-tailed)
Usefulness scale: 1: Not at all; 2: Slightly; 3: Moderately; 4: Very; 5: Extremely
Frequency of use scale: 1: Never; 2: Occasionally; 3: Sometimes; 4: Frequently; 5: All the time

The lack of difference between the BUAs and use was expected in light of the integrated BUAs regarding the usefulness of risk management. For example, the integrated BUAs in assessing downsides were in line with the greater extent of risk management used in this area. Interview data revealed that this could partly be because Organisation D members tended to possess conservative BUAs about risk management that reflect traditional risk management processes, such as rules, principles and structures. Thus, the use of risk management was more aimed at downside risks, which was emphasised by many public sector organisations in the past (McPhee, 2002). One interviewee indicated that risks were referred to as ‘the failure to’, and that such
failures were addressed by using the controls that were in place. Another interviewee also highlighted what could go wrong when discussing risk management:

[If you start with ‘the failure to’ forces to really directly explain in an unambiguous way. ... Failure to maintain service of an operational system, failure to maintain financial control of the division’s budget, failure to maintain good workforce to deliver all the responsibilities of the division. ... So, I know that a control that exist for failure to control of the budget is firstly we set a budget that we can refer to. We have a program of financial delegations that we can refer to. We have a monthly way of tracking what the budget spend is, OK? We have a reporting, we have a system in-built control that not being able to do things, purchase orders for invoices, so I would apply a combination of those controls in day-to-day business anyway. (Organisation D, Operator Group 4)

It [risk management] is more about looking at what can go wrong as opposed to what we can make right. (Organisation D, Operator Group 6)

As mentioned previously, fragmented BUAs were observed in certain functions or teams, which could indicate a reduced use of risk management in strategic or operational decision-making. In Organisation D, the majority of participants suggested that risk management had been so successfully integrated into operational processes, they had become ‘invisible’. This prompted the suggestion that some members may have commented on their infrequent use of risk management because they did not recognise that they used risk management:

[We are such an operational organisation, we have to have that risk management in place. Even if it is seamless and invisible to people who are doing, just doing their job. That is one of our problems. Risk management is seen as ‘I am just doing my job’. ... [Risk management is] hidden, mostly. (Organisation D, Executive Group 1)

For this reason, some participants suggested that members should be reminded that they constantly undertook risk management in their everyday jobs. Interviewees mentioned that they would like to see more members shaping their BUAs favourably towards the idea of risk management in daily decision-making to enhance its use. This could be achieved by bridging the gap between members’ awareness of managing risk and actual risk management activities
in strategic and operational decision-making by promoting risk management as a decision-making tool, encouraging members to be more accountable and take more responsibility for risks:

_We just need to set up a particular standard and stand back to allow people to be more accountable and learn by themselves._ (Organisation D, Operator Group 2)

Supporting this suggestion, one interviewee from the executive group agreed that they would like to devolve responsibilities to lower levels of the organisation, where individuals could make sound decisions through risk management:

_[A] lot of that [risk management] is also about probably empowerment of them and delegation of decisions and the more we try and push delegation right down and, then again accountabilities down, the more they are going to need to know and be understood of the options they take._ (Organisation D, Operator Group 3)

Interviewees from both the operator and executive groups argued that if their BU As about risk management in strategic or operational decision-making were more integrated, that is, they were made more aware of and were more proactive about risks, it could help members to address risks more organically in everyday decision-making rather than discussing risks only at biannual planning meetings. In this way, emerging risks could be scrutinised more closely to determine whether they needed to be treated prior to routine risk workshops:

_Now I wouldn’t say we are integrated enough yet. We are getting there. … a philosophy of active, proactive risk management … there is a way you can make it [active, proactive risk management] work. Within the business units, we are proactive [in identifying and assessing risk]. And every six months, we snap shot where we are. So to do that, you have to keep a bit of awareness of what is going on with the corporate calendar [business planning reviews/workshops] and what is going on with the business calendar [being aware of risk on a daily basis] and try to get some [risk management on a daily basis] along there [business planning reviews/workshops]. (Organisation D, Operator Group 4)_

_[I] like to able to capture risks more dynamically when we do see things happen. And, again, we do watch closely what our industry to do that because we have our formal risk workshops twice a year, but better
In summary, this section examined the differences between members’ BUAs and their use of risk management. The results showed that little difference existed between BUAs and the use of risk management, reflected by the existence of integrated BUAs among members. Fragmented BUAs about risk management in strategic or operational decision-making were likely to result in the infrequent use of risk management in this area. The results highlighted that members’ BUAs could be related to their use of risk management.

The next section explores how the composition of the risk cultural environment shaped the BUAs of members and their use of risk management across the organisation.

8.3 Organisation D: The effect of risk cultural environments on members’ BUAs and their use of risk management

This section focuses on the composition of the risk cultural environments in Organisation D and how these environments influenced members’ BUAs and their use of risk management for different purposes.

8.3.1 Organisation D’s risk cultural environments

This section provides a summary of Organisation D’s risk cultural environments (see Appendix 15 for a detailed analysis). Figure 8.1 illustrates the organisation’s current and preferred risk cultural environments as perceived by members. Organisation D’s members perceived that the organisation possessed a stronger controlling environment because of the need to ensure a high level of safety and regulation across its activities. The presence of goal-oriented and
collaborative risk cultural environments was similar, with an increasing focus on aligning activities to goals, open discussions and interaction among members. The innovative risk cultural environment was perceived to be the weakest environment. Both the executive and operator groups wished for greater collaborative and innovative risk cultural environments.

Figure 8.1 Organisation D’s risk cultural environments

Interviewees’ commented that the organisation possessed some characteristics of the collaborative risk cultural environment, such as participation and interaction, which had become more prominent in recent years as the organisation had moved more towards a greater collaborative cultural environment. Members tended to share risk information across the organisation. Other collaborative characteristics found in Organisation D included guidance and mentorship in risk managing, openness in discussing risks and support for risk management from executives and senior managers.
8.3.2 The effect of Organisation D’s risk cultural environment

The questionnaire survey results showed that members in Organisation D agreed that a collaborative risk cultural environment had a positive influence on their BUAs and their use of risk management. Participants also believed that innovative and goal-oriented cultural environments moderately helped in risk management and influenced their BUAs that risk management was useful (see Table 8.2).

Table 8.2 Effect of the risk cultural environments

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A collaborative environment helps organisational members to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.86 (0.88)</td>
<td>4.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>4.07 (0.75)</td>
<td>4.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>4.10 (0.77)</td>
<td>4.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.93 (0.94)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>An innovative environment helps organisational members to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.24 (0.95)</td>
<td>3.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.45 (0.78)</td>
<td>3.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.55 (0.87)</td>
<td>4.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.45 (0.83)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>A goal-oriented environment helps organisational members to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>3.41 (1.02)</td>
<td>3.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.31 (0.97)</td>
<td>3.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.38 (0.94)</td>
<td>4.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.48 (1.06)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>A controlling environment helps organisational members to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand the executives’ thoughts and attitudes towards risk management</td>
<td>2.97 (1.02)</td>
<td>3.00</td>
</tr>
<tr>
<td>understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>2.79 (0.94)</td>
<td>3.00</td>
</tr>
<tr>
<td>manage risks in decision-making</td>
<td>3.17 (0.93)</td>
<td>3.00</td>
</tr>
<tr>
<td>enhance their belief that risk management is useful.</td>
<td>3.00 (0.96)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Scale: 1: Strongly disagree; 2: Disagree; 3: Neither disagree or agree; 4: Agree; 5: Strongly agree
In some cases, the presence of the controlling risk cultural environment resulted in members believing that risk management was a box-ticking exercise, a characteristic that has been observed in studies (Arena et al., 2010; Power et al., 2013). This rule-based and process-oriented environment resulted in members not being aware of their risk management activities and believing that risk management simply involved documentation and reporting.

Since elements of risk management were embedded in Organisation D’s operational decision-making processes and training, some members were not aware of undertaking risk management as part of their jobs, suggesting that the usefulness of risk management was not considered by members. Interviewees from the executive groups provided examples of operational risk-based decisions that members make as part of their duties without being aware that they were managing risk:

[A]s part of their culture, as part of their training, etc., they should be looking at that from a risk point of view and assessing the risk. ... An enclosed entry [one of the operational processes] as a high risk-based activity, so [the staff member who undertakes the operational process] going into a [xxx], he will need to fill out the form as well as assessing the other broader risk to make sure there is nothing of a chance of that being missed out. (Organisation D, Executive Group 3)

I would caution any sort of research in [Organisation D] on risk management, because [Organisation D] is, by its very nature, the organisation that manages risk. So, a lot of times, a lot of risk management in [Organisation D] is not called risk management. ... It is so firmly embedded, it is seamless ... it is just part of what they do. ... officer in [operational] area, they make risk management decisions as to whether or not to task [a transportation] to go out and find a survivor. Now, if it is horrible weather and raining and all the rest of it, they make the decision not to send. That is an example. It is a bit more complex than that. That is recorded within their system. It is not recorded as a risk decision, it is just recorded as the decision made and the reasons given. It is a risk decision ... a system, you plug in different elements about [Organisation D’s main operation], it tells you whether or not it is a high risk or low risk; if it is a high risk, you inspect it. (Organisation D, Executive Group 4)

I think they absolutely do in their actions but they sometimes don’t realise what they are doing. ... unwittingly these guys do risks every day. They make a decision about whether or not to do something based on
their review about what they have done in the past. They call it history, they call it technical knowledge, and they look at processes that are in place [to mitigate risks]. So, if you ask any one of these guys out here, ‘Do you actively participate in risk management?’ and they will go, ‘No, I will leave that to [the risk management function]’, but the real answer is, ‘Yes’. (Organisation D, Operator Group 4)

In addition, the use of risk management was only expressed when members had to document their jobs:

_I am not sure they [members] think of it particularly as a risk management practice until they have to document it._ (Organisation D, Operator Group 5)

The strong controlling and weak innovative risk cultures in Organisation D strongly influenced members’ BUAs towards a conservative attitude about risk management in assessing downsides and focusing on compliance. Members described two rationales behind their BUAs. Because Organisation D’s core operations involved dangerous activities and potentially life-threatening situations, it was emphasised that activities involving the safety of staff and the public should only use risk management approaches that had proven to be successful in the past—in Organisation D, these were generally adopted as rules, structure and operational procedures. Because these rules, structures and operational procedures had been effective for the assessment of downside risks in the past, members believed in the benefits of these conservative approaches and were not inclined to change their BUAs about risk management for these activities; however, they felt that there were situations that required the use of an innovative approach:

_A large majority of our operational [core operational areas] ... they are highly aware of risk management and the benefits of using it. As I have said, it is not necessarily overt risk management, but they understand those processes and what makes it up. ... we do risk management because it makes sense to people. ... We don’t need to necessarily enforce it because it is already there. It is just built into our policies and procedures. People follow it, not being necessarily because they are forced to [do it], but it gets the outcomes they need._ (Organisation D, Executive Group 4)

_To change a policy and procedure in an organisation like this ... some of our established guys are not comfortable with is making an_
Another rationale behind these conservative BUAs was that members took pride in the gradual development and implementation of a world-class risk model for operational processes, leading to members’ strong preferences for a traditional, evidence-based approach. Three participants consistently described it as ‘if it is not broken, don’t try to fix it’.

Members’ conservative attitudes led to risk-averse behaviours, which agrees with researchers (Kotter and Heskket, 2011) who argue that when members focus on downside risks only, decisions can be postponed or risks are not taken when responsible risk-taking may have provided benefits to the organisation. To illustrate this, some interviewees mentioned a situation in which, during a prolonged period of financial stress, the industry regulated by Organisation D faced emerging risks, which, in turn, influenced Organisation D. With changing risk profiles and their implications, the organisation needed to constantly keep up with emerging risks and to look for upside risks. However, members tended not to ‘let go of the traditional view’ (Organisation D, Operator Group 4) in certain instances where it may have been beneficial to do so:

Traditional, it is very conservative. There is a general aversion to taking risks. We are a [industry] regulator, you would expect that. … we don’t like taking risks [where] there are times we have to. … But we do have quite a historical view of risk. When we have got new incentives, we are trying to put a change in. I think what this organisation doesn’t do is let go of that traditional view and says, ‘You know, our guys are going to have to take a risk with this’. Sometimes you have to take a bit of punt. But we sort of stay away from that. … As a modern regulator, which is what we want to try to be, we want to be able to target our efforts to where the risk is. I think that is evolving. (Organisation D, Operator Group 4)

Further, members tended to avoid risk rather than managing risk, when taking risk and identifying risk treatments would have been a more effective way to solve problems:
As I understand, there is no appetite to accept the residual risk to be ‘high’. There could be many valuable reasons, but the organisations must have the attitude to accept the risk first and then find the most effective and efficient way to bring this to a lower or an acceptable level over the time. This will not only improve productivity and innovation, but also encourage staff to promote their ideas drawn upon from their experience and skills. (Organisation D, Operator Group D31)

One interviewee from an executive group highlighted the importance of a more prominent innovative risk culture and its potential effect on the BUAs and the use of risk management to ensure the organisation’s members are ready for and up-to-date with managing risks arising from new technologies:

_I guess looking at different solutions to problems, I think I do try to be innovative in that regard. I think we certainly try to be innovative in looking at those emerging risks and how we address them. Whether it is looking across what is happening with technology that are developing and bringing those into our risk world as well._ (Organisation D, Executive Group 3)

Another interviewee noted it was important for the organisation, as a modern regulator, to manage new risks in decision-making. Many participants commented that Organisation D could improve its cultivation of an innovative risk cultural environment to persuade members to believe in the usefulness of risk management for certain cases. Some operators also thought that having a more prominent innovative culture would help solve problems arising from emerging risks in unusual situations:

_[T]here might be pockets of it, where we have to think outside the square to really work on something._ (Organisation D, Operator Group 5)

Interviewees also highlighted the tensions in finding a balance between the goal-oriented and the controlling risk cultural environment, which could influence their use of risk management. Participants commented that some members, under a controlling environment, had the attitude that rules must be followed ‘to the absolute letter’ and placed the utmost importance on conformity to rules and procedures. From a goal-oriented perspective, however, members also
needed to think about achieving organisational or operational goals through the sound and practical application of risk management.

\[ T \]here is a balance that needs to be found where, ... compliance to the absolute letter or compliance in spirit in general terms. (Organisation D, Executive Group 1)

Participants also believed that a stronger collaborative environment would help with risk management in decision-making. Specifically, some interviewees considered that more interaction, such as sharing risk knowledge across the organisation, would facilitate a better use of risk management:

\[ H \]opefully, there is a sharing between the divisions. If one division is doing well or using a certain approach that is working, then that is communicated to other divisions. (Organisation D, Operator Group 6)

Some interviewees argued that the organisation needed to cultivate a flexible risk cultural environment that provided members with more opportunities to make decisions. This environment would help members have the BUA that they could use a flexible approach to making decisions by considering the risks, their treatments and their impacts:

\[ I \] think they [members] want that [devolved responsibility in decision-making] as well but it is also, there is a dilemma for them too because they are still trying to work out [making decisions through managing risk] then, and we need to articulate how much we want them to do that. So, we are still with that piece of work undergoing at the moment. So, they need to understand how much flexibility they have, to make that decision. And then they have that flexibility. (Organisation D, Executive Group 2)

Further, many interviewees highlighted how a collaborative risk cultural environment helped them with risk management in decision-making. Characteristics of the collaborative environment found in Organisation D included openness, support, interaction, participation and sharing of information, which has enabled or could potentially enable members to develop a holistic understanding of the implications of the risks faced by the organisation:
We tend to have a good coverage of our risks and very frank and honest discussions about the scale and severity of those risks. (Organisation D, Operator Group 6)

I understand there are business reasons for that and confidentiality depending on what risks you are identifying, but I think if you could see other people’s risks, so our general manager, he just published our risk register and business plan for anyone to see. And that is the way it is, you know we just share it. But that is a slow change in [Organisation D] at the moment. But if you could look into a system and you could see other risks, I think that would help you to understand what is happening across the organisation. (Organisation D, Operational Group 5)

Consistent with Arena et al.’s (2017) concept regarding risk boundaries, characteristics of the collaborative risk cultural environment in Organisation D expanded conversations about risk management beyond its original scope, enabling members to be exposed to the opinions of members from other functions and teams and to use risk management similarly in other areas:

[We] do talk about what other people are doing and try to share successes in other areas. And that has been a focus for us for the last couple of years, becomes more one [Organisation D] and taking an approach that someone else does, has worked really, really well and has lowered that risk and saying, ‘Why can’t we apply that somewhere else?’ So, there is definitely, we do talk and we try to share as much information about what has really worked in that area. (Organisation D, Operator Group 1)

In summary, under a strong controlling and a weak innovative risk cultural environment, members’ prior experiences of the effectiveness of existing rules and procedures in managing risks and their unwillingness to change appear to have played a role in influencing their positive BUAs about the effectiveness of risk management in assessing downside risks, but not for upside risks. However, participants were also aware of the need to be innovative in managing risks and the importance of achieving organisational and operational goals. In addition, participants noted that a collaborative risk cultural environment helped members to understand and manage risk through participation, interaction, support and openly sharing risk information. Participants, therefore, preferred that the organisation nurture a more collaborative and
innovative risk cultural environment to positively influence their BUAs and their use of risk management in decision-making.

The following section examines how risk mechanisms influence the members’ BUAs and their use of risk management.

8.4 Organisation D: Risk mechanisms and their effects

This section explores the usefulness and use of formal and informal mechanisms in Organisation D and investigates how these risk mechanisms influence members’ BUAs and their use of risk management for different purposes.

8.4.1 Organisation D’s risk mechanisms

This section discusses members’ perception on the helpfulness of risk management mechanisms and their actual use in Organisation D. A detailed discussion, including descriptive statistics and interview quotes, is provided in Appendix 16. Organisation D possesses standard formal risk mechanisms, such as risk management frameworks, including a risk matrix and a risk management policy, an online induction that includes risk management training, an audit committee, business plans with risk management components, risk registers, a risk management IT system, operational processes incorporating risk management elements and reporting processes. Informal mechanisms used by organisational members include risk discussions or conversations outside of meetings, networking, an informal risk-based approach for decision-making, risk-related advice from experts, risk management role models and learning from prior experience.
Respondents indicated that the three most useful mechanisms were all informal and included discussions about risk management outside meetings, informal meetings and learning from risk management role models. The formal mechanisms perceived to be most helpful were formal reporting processes, the risk management framework and risk management training.

Informal risk discussions outside of meetings were perceived to be most helpful and were used the most. The next most frequently used mechanisms were business plans incorporating risk management, the risk management framework and risk management training. Despite their preference for informal risk mechanisms in terms of their usefulness, members responded that they used formal mechanisms as much as informal mechanisms because mandatory rules and processes required them to use these mechanisms, irrespective of how helpful they were perceived to be.

The interviewees and some comments from questionnaires highlighted three examples of risk mechanisms that had not been included in the questionnaires. First, support from senior management was seen as positive—for example, in a situation involving abusive behaviours from clients towards staff, executives explicitly supported an employee’s risk treatment strategy. Second, Organisation D adopted a reward program that recognised members who demonstrated behaviours in line with organisational values on work health and safety. Third, subject matter experts were considered an important resource in managing risk.

With respect to the role and effectiveness of the risk management function, participants from the executive group took the view that the risk management function was primarily responsible for providing support to both the audit committee that oversees the organisation’s risk management framework as well as to executives and senior managers in their strategic decision-making. This may be compared with the views of Organisations B and C—while these organisations also perceived their risk management function to be ‘independent overseers’ with
respect to compliance, internal controls and risk prevention, in contrast, they perceived their risk management functions to take a ‘business partner’ approach (Kaplan and Mikes 2016, p. 11) in their influence over key strategic decisions.

8.4.2 The effects of Organisation D’s risk mechanisms

Organisation D members believed that both formal and informal mechanisms helped them to incorporate risk management when they made decisions (see Table 8.3). However, the effect of risk mechanisms on members’ BUAs was not clear. Respondents believed that both formal and informal mechanisms were important for risk management.

Table 8.3 Effect of risk mechanisms

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal mechanisms (systematic, structured mechanisms)</strong> help me to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.45 (1.06)</td>
<td>4.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.48 (0.87)</td>
<td>4.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>4.00 (0.89)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms (unwritten, implicit, or casual mechanisms)</strong> help me to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• understand executives’ thoughts and attitudes towards risk management</td>
<td>3.14 (1.13)</td>
<td>3.00</td>
</tr>
<tr>
<td>• understand my colleagues’ thoughts and attitudes towards risk management</td>
<td>3.45 (0.99)</td>
<td>3.00</td>
</tr>
<tr>
<td>• manage risks in decision-making.</td>
<td>3.79 (1.11)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Formal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.52 (1.09)</td>
<td>4.00</td>
</tr>
<tr>
<td>• are more important in risk management than informal mechanisms.</td>
<td>3.41 (1.12)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Informal mechanisms in my organisation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• enhance my belief that risk management is useful</td>
<td>3.55 (0.99)</td>
<td>4.00</td>
</tr>
<tr>
<td>• are more important in risk management than formal mechanisms.</td>
<td>3.03 (1.30)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>I think both formal and informal mechanisms are equally important in risk management.</strong></td>
<td>3.79 (1.15)</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Scale: 1: Strongly disagree; 2: Disagree; 3: Neither disagree or agree; 4: Agree; 5: Strongly agree
From the comments of the questionnaires and the interview data, participants considered certain formal and informal risk mechanisms to help shape their BUAs and enhance their use of risk management in two ways. A large number of interviewees mentioned that risk mechanisms such as informal risk conversations in meetings and formal risk discussions in risk assessment workshops were helpful because they stimulated diverse ideas. Thus, these mechanisms could influence members BUAs and their use of risk management by giving members a more prudent understanding of risks and, in turn, facilitate decision-making. According to the interviewees, members were able to expand their own views by considering other members’ views on risk and options through risk conversations and knowledge sharing during conversations:

[Risk management] is about saying, ‘Have you thought about...’ and causing people to think a little bit laterally. ... ‘Have you considered this risk? Or this issue or if you do this then that might happen’. (Organisation D, Executive Group 1)

[We get together and we go through and look at all our risks again to see if they are still relevant, see if the mitigations and treatments are still relevant. That is when you get, grab best understanding about how the risks of the organisation is changing or not, and what our colleagues’ views are on that... (Organisation D, Executive Group 2)

Because of the usefulness of risk conversations and knowledge sharing, several interviewees pointed out that existing risk mechanisms could be improved by facilitating the sharing of risk information with other members. One interviewee added that communicating the rationale behind certain decisions, the impact of decisions and the risks specific to the organisation would be helpful. Participants also believed that communication between members who make decisions and members who are affected by those decisions would be beneficial. In this way, risk mechanisms could also help to close the gap between members’ awareness of undertaking risk management and actual risk management activities, as discussed in the previous sections. This would lead to improved awareness of risks and the BUA that risk management is useful in day-to-day decision-making. Examples of these improved risk mechanisms include risk training that could enhance knowledge sharing, risk communications that distribute lessons...
learnt across the organisation and identifying informal risk champions who possess experience and expertise in subject matters.

*It would be better if we had an idea of people who were, who had previous careers in risk management or previous roles or lots of experience to refer to somehow, but there is probably a bit of knowledge sharing gap in [Organisation D].* (Organisation D, Operator Group 5)

Risk mechanisms could also be improved if they were relevant to operator tasks and activities and facilitated day-to-day operations, instead of focusing only on documentation—this could influence members’ BUAs and their use of risk management simultaneously. Interviewees highlighted that it was particularly important for risk mechanisms to be tailored to each business area:

[T]hey [members] are very keen to do it, because they have been here for quite a long time, they actually developed the way the organisation has done risk assessment and risk management brought into the business (Organisation D, Executive Group 3)

The language, understanding and purposes of risk management should be targeted specifically to operator groups. One interviewee mentioned that internal training on risk management had been more effective than generic external courses because the former reflected the organisational core business knowledge in managing risk:

*I am a big believer [that] internal education is a lot more effective than just going to an external course, because then you can apply to your work.* (Organisation D, Operator Group 5)

Participants argued that many of the operational staff have had long experience in the field and had been taught risk management informally in the industry regulated by Organisation D. Hence, these members used risk management through informal mechanisms such as conversations with their more experienced colleagues:

*Operational level risk management relies on the individual and team experience of dealing with risk rather than a more formalised approach.*

*Implementation of a safety management system is under development to*
improve the current, more informal risk management process at the operational level. (Organisation D, Operator Group D17)

Large majority of our operational, as I have already described the main operational officers ... have an auditing background or they have been [career skills specific to the industry that Organisation D regulates]. They are highly aware of risk management and the benefits of using it. As I have said, it is not necessarily overt risk management. But they understand those processes. And what makes it up. (Organisation D, Executive Group 4)

The informal role of middle managers was thought to be important in that they could discuss risk management with their teams using relevant language and provide appropriate feedback on their team members’ use of risk management:

[The risk mechanisms that can help to improve risk culture] comes to a management consciousness of being self-aware ... managers need to be self-aware, it is not just about how they see the world, it is about how everybody else sees the world. And you can’t understand other people’s perspective until you understand your effect on people ... my perspective is to see my colleagues and my peers actively [put] themselves in their staff shoes and saying, ‘What do I need to do really help bring them along [in managing risk]?’ (Organisation D, Executive Group 1)

Some formal risk mechanisms were perceived as unhelpful if they created excessive paperwork and prevented members from doing their jobs. If mechanisms were seen as overly bureaucratic, members were less motivated to use risk management in its intended way:

Sometimes we can be overly bureaucratic and so an individual or team might look at what is required and then try to find a different way. (Organisation D, Operator Group 5)

Other unhelpful attributes of formal risk mechanisms were their non-intuitiveness and complexity, which also influenced members’ BUAs. For example, when a risk management IT system was perceived to be complex, cumbersome, not interactive and deficient in identifying the allocation of responsibilities to relevant members, it became a hindrance to risk management rather than facilitating the sharing of knowledge. This resulted in creating further barriers to risk management tasks:
Because it was not intuitive there are always things you have to explain and having to explain the context just puts further barrier in front of people before actually doing tasks. (Organisation D, Operator Group 1)

Similar to members of Organisation C, many interviewees agreed that they would like to see more streamlined and simplified risk mechanisms. In the previous example, participants would have liked a simpler, more user-friendly and dynamic risk management system. Other risk mechanisms should enable members to focus on core risks through simplification:

We moved from very much focusing on identifying every single risk we can possibly think of to identifying the key risks within the areas and actually implementing the controls and making sure that the control owners would know and making sure that they are being managed. (Organisation D, Executive Group 4)

In summary, Organisation D has a standard set of formal risk mechanisms, including a risk management framework and business plans that incorporate risk management components, as well as informal mechanisms, including risk conversations, informal risk management meetings and learning from risk management role models. Participants viewed that their organisational risk mechanisms influenced their use of risk management and their BUAs. Discussion and information sharing were positive influences, whereas bureaucratic processes hindered members’ attitudes about the usefulness of risk management. In Organisation D, participants did not believe that the organisation needed more risk mechanisms but would prefer to see an improvement in existing mechanisms and a greater degree of information sharing, job relevance and simplified processes.

8.5 Summary of Chapter 8

This chapter explored the BUAs of Organisation D members and their use of risk management, and whether the BUAs differed from the use of risk management. In addition, Organisation D’s
risk cultural environments and risk mechanisms were examined to gain an understanding of how these influenced members’ BUAs and their use of risk management.

According to findings from the questionnaire responses, integrated BUAs appeared to be the most evident. However, data from the in-depth interviews revealed the existence of fragmented BUAs about risk management in strategic or operational decision-making, possibly resulting in the reduced use of risk management in this area.

Organisation D has a strong controlling risk cultural environment, followed by similar levels of goal-oriented and collaborative environments. A stronger controlling risk culture and a weaker innovative risk culture resulted in more conservative BUAs overall, resulting in members focusing more on the negative side of risks as well as using risk management in traditional areas. Participants, however, found that a collaborative environment, with its openness, support, participation, interaction and sharing of information, facilitated risk management in decision-making through the generation of ideas. Some participants also believed that a greater innovative risk cultural environment would help shape members’ BUAs and their use of risk management through responsible risk-taking and applying an innovative approach to emerging or changing risk.

Participants believed that three informal mechanisms, namely discussions about risk management outside of meetings, informal meetings and learning from risk management role models, were most helpful. Informal discussions with executives occurred relatively frequently. However, respondents used formal and informal mechanisms to a similar extent. Both formal and informal mechanisms helped to develop members’ BUAs and their use of risk management. Positive influences included the discussion of various ideas and information sharing, job relevance and learning from members who had long experience in the field. Certain formal mechanisms were perceived as hindrances because they focused solely on documentation or
were non-intuitive and complex, negatively influencing members’ BUAs on the usefulness of risk management.
Chapter 9: Comparison and discussion

This chapter first provides a comparison of the major similarities and differences of members’ BUAs, their use of risk management, the composition of risk cultural environments and the risk mechanisms across the three organisations. This is followed by a discussion about how risk cultural environments and risk mechanisms influenced members’ BUAs and their use of risk management in the three organisations.

9.1 An overview of the major similarities and differences across the three case studies

This section compares members’ BUAs, their use of risk management, the risk cultural environments and the risk mechanisms across the three case study organisations.

Table 9.1 summarises members’ BUAs, their use of risk management and whether members’ BUAs were related to their use of risk management. All three perspectives of BUAs—integrated, differentiated and fragmented—were observed in the three organisations, but different perspectives were related to different uses of risk management. All three organisations showed integrated BUAs (that is, similar beliefs and attitudes between executive and operator groups) about the usefulness of risk management in the assessment of downsides and for compliance. Members from the three organisations tended to show a ‘general orientation’ (Wilkins & Ouchi 1983, p. 471), in which they generally believed that risk management was useful for compliance.

However, differences in members’ BUAs about risk management in decision-making were found across the three organisations. According to the questionnaire responses, differentiated BUAs were found in Organisations B and C, but not in Organisation D. Differentiated BUAs reflect that the BUAs of certain operational members involved in decision-making were
different to those of the executive group. The executive groups in Organisations B and C had a stronger belief in the usefulness of risk management in decision-making than the operator group, which Martin (2001) considers as an ‘inescapable’ dynamic, indicating that differentiated BUAs have been commonly seen in prior studies (Arena et al., 2010; Hall et al., 2015).

Fragmented BUAs about decision-making were found in the interview data for all three organisations. Participants observed that certain operator teams had BUAs that were incongruent to those of their own teams or functions in terms of the usefulness of risk management in strategic or operational decision-making. Consistent with Martin’s (2001) argument, BUAs in different individuals and teams continually changed, while consensus on the usefulness of risk management in decision-making happened in an issue-specific manner (within particular operations or tasks where they directly experienced its usefulness during the process) or were indirectly guided by other influential members’ positive BUAs towards the usefulness of risk management.

In Organisation B, some members in core operations, IT and physical security commented that they considered risk management useful in making risk-based decisions. Certain participants in Organisation C thought that risk management was useful when operational members made decisions on team resource planning, on-the-job risk assessments and project delivery. Some members in Organisation D agreed that risk management was useful in their cross-team discussions about operational decisions, enabling the prioritisation of tasks. However, other members in all three organisations did not have favourable BUAs about the usefulness of risk management, resulting in the reduced use of risk management in decision-making. These fragmented BUAs proved to be ‘the complexity, incongruity, context-dependency’ (Mike, 2012, p. 19) of everyday risk management, which is discussed further in Section 9.3.
Risk management was predominantly used for compliance purposes by Organisations B and C, while Organisation D mostly used risk management for assessment of downsides. This finding was consistent with prior research that highlights the public sector’s focus on risk management for compliance, governance, accountability and assessing downsides (Barrett, 1999, 2001b; McPhee, 2005b, 2006a, 2009). Risk management in decision-making was found to be used less than risk management for compliance and assessment of downsides across all three organisations.

There were no clear differences between members’ BUAs regarding the usefulness and the use of risk management for compliance purposes across the three organisations and for the assessment of downsides in Organisations B and D. Integrated BUAs for compliance and assessment of downsides suggests that consensus among members may reduce non-constructive conflicts (Schein, 2010) in relation to members’ resistance to the use of risk management and may also strengthen clarity and consistency (Collins and Porras, 2002) of risk management for these purposes. As discussed in management accounting and control contexts (Chenhall, 2003), the usefulness of a particular management control is important to enable the use of that control. The findings in this thesis is consistent with this suggestion.

Significant differences between members’ BUAs regarding the usefulness and the use of risk management in decision-making areas were found in Organisations B and C. It was noted that such differences existed where differentiated or fragmented BUAs were observed. Conflicting or fragmented views regarding the usefulness of risk management in decision-making may affect risk management practices (Power et al., 2013). In these cases, they resulted in the reduced use of risk management in decision-making.
Table 9.1 Analysis of BUAs and the use of risk management across the three organisations

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Organisation B</th>
<th>Organisation C</th>
<th>Organisation D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members’ BUAs</td>
<td>Questionnaire response:</td>
<td>Questionnaire response:</td>
<td>Questionnaire response:</td>
</tr>
<tr>
<td></td>
<td>- Integrated BUAs about risk management for assessment of downsides, compliance and the development and implementation of policy or providing advice.</td>
<td>- Integrated BUAs about risk management for assessment of downsides and compliance.</td>
<td>- Integrated BUAs across all four categories.</td>
</tr>
<tr>
<td></td>
<td>- Differentiated BUAs about risk management in strategic or operational decision-making.</td>
<td>- Differentiated BUAs about risk management for strategic or operational decision-making and the development and implementation of policy or providing advice.</td>
<td></td>
</tr>
<tr>
<td>Interviews:</td>
<td>- Fragmented BUAs about risk management for strategic or operational decision-making and the development and implementation of policy or providing advice.</td>
<td>- Fragmented BUAs about risk management for strategic or operational decision-making.</td>
<td>- Fragmented BUAs about risk management for strategic or operational decision-making.</td>
</tr>
<tr>
<td>Risk management’s most used purpose(s)</td>
<td>- Compliance</td>
<td>- Compliance</td>
<td>- Assessment of downsides</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Compliance</td>
</tr>
<tr>
<td>Members’ BUAs and use</td>
<td>There were significant differences in risk management in strategic or operational decision-making and the development and implementation of policy or providing advice.</td>
<td>There were significant differences in risk management for assessment of downsides, strategic or operational decision-making and the development and implementation of policy or providing advice.</td>
<td>No significant differences were found.</td>
</tr>
</tbody>
</table>

Figure 9.1 compares the composition of the four risk cultural environments across the three organisations. The organisations displayed a similar pattern of risk cultural environments, with the controlling risk cultural environment being stronger than the other environments. This was expected based on the findings of Parker and Bradley (2000), which highlighted a prevailing traditional controlling culture in the public sector. Respondents from Organisations B and C perceived that the goal-oriented environment was the second strongest culture, while participants from Organisation D believed that their organisation had similar levels of goal-
oriented and collaborative risk cultural environments. All three organisations had a weak innovative risk cultural environment.

Figure 9.1 Comparison of risk cultural environments

All three organisations had a standard set of formal risk management mechanisms, including risk management frameworks (policies, procedures and guidelines), business plans incorporating risk management elements, risk training, risk appetite and tolerance statements, risk assessment templates and checklists and operational processes incorporating risk management components. The roles of the risk management function of two of the organisations were similar, having been built around compliance and regulatory activities with
an emphasis on formal reporting rather than taking a ‘business partner’ approach (Hall et al., 2015, p. 4). The risk management function in Organisation D had a combination of both compliance and ‘business partner’ approaches. Apart from the standard mechanisms, Organisation B also had a formal risk champion network which was not found in Organisations C or D; however, some Organisation B members indicated that it did not play an important role in embedding desirable BUAs or in use of risk management because of its lack of influence over organisational members.

An informal risk management mechanism frequently adopted by all three organisations was informal risk assessment. Members from Organisations C and D commented that learning from role models and past experiences were other important informal mechanisms. Unlike Organisations B and C, Organisation D mostly used risk conversations to undertake ‘the work of risk’7 (Power, 2016a, p. 276) and ‘risk talk’ (Mikes, 2016, p. 255), which involves the informal discussion among members of a wide range of everyday risk issues.

In summary, integrated, differentiated and fragmented BUAs were found in all three organisations. While integrated BUAs appeared to be more related to the use of risk management for compliance and assessing downsides, differentiated and fragmented BUAs were seen in the use of risk management in strategic and operational decisions. A strong controlling risk cultural environment and formal mechanisms were found in all three organisations, but Organisation D possessed a greater collaborative risk cultural environment and an increased use of informal mechanisms. How risk cultural environments and risk mechanisms may influence members’ BUAs and their use of risk management across the three organisations are discussed in the following two sections.

7 The work of risk or ‘riskwork’ represents ‘the situated human effort, in combination with material infrastructure, through which risk management and governance practices come to be constructed’ (Power 2016b, p. 3)
9.2 The influence of risk culture on risk management for compliance and assessment of downsides

As mentioned previously, there were no significant differences in members’ BUAs and their use of risk management for compliance-oriented activities, monitoring programs and assessing downsides between the three case organisations. All three organisations exhibited a strong controlling risk cultural environment and the use of formal mechanisms. This section discusses how a controlling risk cultural environment and formal risk mechanisms influenced organisational members’ BUAs regarding compliance and assessment of downsides and their use of risk management for these purposes across the three case organisations. These effects appeared to be similar for the three organisations.

With the Australian government’s focus on establishing and maintaining formal, systematic risk management systems (ANAO, 2001; ANAO, 2011; Department of Finance, 2014) and incorporating risk management into business-as-usual operations (ANAO, 2009; Department of Finance, 2014), the characteristics of a strong controlling risk cultural environment and formal mechanisms play a central role in public sector risk management. The characteristics of the controlling environment and formal mechanisms discussed by participants from the three organisations included the focus on controls and rules, formalisation, standardisation, conformity to rules, predictability, stability and dependable delivery, which are generally consistent with the characteristics suggested by Cameron and Quinn (2011).

Based on the interview data, control-orientation, formalisation and conformity to rules reminded members across the three organisations of the importance of risk management for compliance purposes, which in turn facilitated the achievement of government accountability and good governance. In Organisation B, both the operator and executive groups expressed that they had taken risk management for compliance, accountability and governance seriously on
an ongoing basis. Members of Organisation C were also aware of meeting internal and external requirements and were compliant in managing risks in resource planning. In Organisation D, participants stated that most members understood the importance of complying with industry and government standards and the associated formal rules and governance arrangements through compliance-oriented risk management.

Corresponding to the public sector’s emphasis on managing downside risks (Peterson and Fensling, 2011), participants believed that risk management was more than moderately useful for assessing preventable risks and avoiding risky activities. The characteristics of a controlling environment and formal mechanisms that engender predictability, stability and dependable delivery influenced members to focus on maintaining the status quo and avoiding risky and unexpected behaviours in performing their everyday jobs. Members of Organisations C and D considered that risk management for this purpose was most useful in performing their duties.

These findings highlight that the characteristics of a strong controlling risk cultural environment and formal mechanisms could lead to integrated BUAs about risk management for compliance and assessing downsides, which members believed could enhance accountability and governance.

This study also found that risk management for compliance purpose under these characteristics tended to continually reinforce the negative effects associated with generic risk management (Huber and Scheytt, 2013; Power, 2004), including members’ focus on box-ticking exercises, risk aversion and defensive or secondary risk management (Hood, 2002; Power, 2004, 2007).

In relation to risk management for compliance purposes, under a strong controlling risk cultural environment and its focus on formal mechanisms, the negative effects associated with pre-existing generic risk management were augmented, unfavourably influencing members’ BUAs
on the usefulness of risk management and its use. Across the three organisations, rule-orientation, an emphasis on the formalisation of risks and standardised tools such as risk assessment templates and risk plans resulted in members believing that risk management was an onerous and standardised process and lacked job relevance, and that no lessons could be learnt from the past, constraining them to mindlessly ‘ticking boxes’ to fulfil risk management obligations. Some members from the three organisations were observed by participants as meaninglessly completing templates per mandatory requirements while failing to contemplate actual risk, resulting in the poor use of risk management.

In addition, risk management for assessment of downsides could be expressed as risk aversion, which has been previously pointed out as an impediment to efficiency, performance and innovation by public sector regulators (ANAO, 2005b, 2009, 2014a). The excessive emphasis on predictability, stability and dependable delivery did not give members an opportunity to think critically or creatively in decision-making. In particular, where downside risks were strongly associated with reputation, the organisations tended to emphasise documentation and formalisation of risk to avoid or transfer risk to other parties rather than managing the actual substance of risk, which Power (2009) describes as defensive risk management and legitimation. In line with this sentiment, some participants in Organisation B supported the view that these types of behaviour caused missed opportunities for the organisation because of their excessive emphasis on downside risks and reputation. Management of reputational risk was heavily criticised by some members in Organisation C since they believed that the organisation focused less on managing actual risk, resulting in risk management as a formalised practice of risk transfer and the avoidance of accountability and blame. In Organisation D, the primary focus on risk management for assessing downsides manifested as conservative BUAs, which were deeply ingrained. These conservative BUAs resulted in risk-averse thoughts and behaviours in
which decisions were postponed or risk-taking was avoided in situations where responsible
risk-taking may have benefited the organisation.

From the analysis at the organisational level, the negative effects associated with generic and
defensive risk management were constantly reinforced by the downsides of the controlling
environment and formal mechanisms and partially constructed the organisation’s risk
management ‘brand’. In other words, risk management was partially ‘branded’ through the
negative effect of the controlling risk cultural characteristics and formal risk mechanisms,
shaping the thoughts of new or junior members and inciting them to believe that risk
management was solely about completing generic templates and using technical terms and
methods. This ‘branding’ was reinforced by the risk management functions of each organisation,
which emphasised compliance, control, corporate governance and reporting and served audit
committees rather than business supporters or advisors. Because of this, members associated
risk and risk management more with compliance and assessment of downsides than with
decision-making. Risk management in decision-making is explored in the next section.

9.3 The influence of risk culture on risk management in decision-making

This section focuses on risk management in decision-making across the three organisations.
The analysis of results found that, across all three organisations, BUAs about risk management
in decision-making were differentiated and fragmented, and there was a reduced use of risk
management in strategic and operational decisions. This section discusses how the risk cultural
environment and risk mechanisms may influence these fragmented BUAs and the use of risk
management in decision-making. The discussion focuses on four aspects: (1) the effect of the
controlling risk cultural environment and formal mechanisms on members’ BUAs and their use
of risk management in decision-making; (2) the effect of the collaborative risk cultural
environment and informal mechanisms on members’ BUAs and their use of risk management for decision-making; (3) the tension arising from the need to balance different risk cultural environments and mechanisms, and the effect of such tensions on members’ BUAs and their use of risk management in decision-making; and 4) other influences, including the importance of upper and middle management and the types and severity of risks.

9.3.1 The effect of a controlling risk cultural environment and the use of formal mechanisms on risk management in decision-making

As discussed in Chapter 2, public sector organisations are strongly encouraged to make a broad range of risk-based strategic or operational decisions to be productive, efficient and innovative by engaging with risks at all levels of the organisation (Department of Finance, 2014; Queensland Government Department of Education, Training and Employment, 2012; Victorian Government Victorian Managed Insurance Authority, 2015). The public sector, therefore, has been urged to ‘embed risk management into day-to-day business practices’ as per the Commonwealth Risk Management Policy (2014), which has partly influenced public sector organisations to implement risk management into operational processes for decision-making.

When public sector-wide espoused beliefs and values were incorporated into each organisation’s risk management practices, the primary focus was on rule-based, structured and standardised approaches as well as conformity to rules. As mentioned earlier, this approach was reflected in the three organisations, all of which exhibited a strong controlling risk cultural environment and the use of formal mechanisms, such as business plans incorporating risk management and formal risk assessment templates and registers. Across the three organisations, it was found that under a strong risk cultural environment and formal mechanisms, risk management was embedded into many operational processes to ensure members’ safe decision-
making in performing their jobs. Many participants from the operator groups in Organisation D considered their rule-oriented and structured environment necessary for managing risk and helpful in making strategic or operational decisions because their rules and formalities were perceived to be world-class and were developed with input from operators involved in these areas.

In Organisations B and C, however, such rigid rule-based, standardised and structured approaches did not motivate members to consider risk management in decision-making. Participants commented that a lack of flexibility resulted in the reduced flow of information (Kotter and Heskket, 2011), that standardised mechanisms could not address job relevance, and that little judgement was required from members. Therefore, some members did not consider risk management to be useful in their daily decision-making.

The lack of perceived usefulness by some members in these two organisations was also attributed to the existence of formal mechanisms, such as the ineffective communication of the benefits of embedded risk management. While embedded and rule-based risk management occurs on a daily basis, the two case organisations did not articulate to members the reasons for the incorporation of risk management into processes or how it helped to ‘get the job done’. In Organisation B, strategic or operational decisions made and the rationales and benefits of such decisions were not communicated to members. Therefore, some members never received the message that risk management could be useful in making decisions. Evidence from Organisation C supported this view—certain members suggested that a lack of understanding of the benefits of risk management appeared to be associated with some members’ BUAs that risk management was not useful in their daily jobs.

These negative BUAs tended to coexist with the reduced use of risk management. Participants from Organisation B commented that members refused to ‘buy in’ to the supposed usefulness
of risk management, blaming it on the reduced adoption of risk management. Certain participants in Organisation C thought that such BUAs in their organisation had resulted in the lack of or poor use of risk management. These findings are in line with the findings of studies conducted in the fields of management accounting and risk management (Chenhall, 2003; Skaerbaek and Vinnari, 2011; Power et al., 2013), which support the view that members’ BUAs towards the usefulness of risk management are related to the extent to which they use risk management.

9.3.2 The effect of a collaborative risk cultural environment and the use of informal risk mechanisms on risk management in decision-making

The results from this study indicate that a more prominent collaborative risk cultural environment is present in Organisation D than in the other two organisations. In addition, informal risk mechanisms, such as risk conversations, are used more extensively in Organisation D. Certain members of Organisation D responded that risk management had been useful in their strategic or operational decision-making because of their positive experiences resulting from their organisation’s collaborative environment and informal mechanisms. Contrary to prior research, which largely describes risk management in the public sector as the practice of making risks auditable rather than managing the substance of risk (Power, 2004, 2009) and as nothing more than symbolic assurance (Hood and Miller, 2009), this study found that daily risk management in decision-making occurred through sharing knowledge, openness, participation, prompting diverse ideas through risk conversations, informal risk assessments and learning from role models and past experience.

Although the collaborative risk cultural environment was relatively weak in Organisations B and C, some positive effects were observed. This thesis originally posited that the
characteristics of the collaborative risk cultural environment and informal risk mechanisms would lead to a ‘shared’ understanding of contexts as well as common languages (Cameron and Quinn 2011; O’Reilly et al., 1991). With most organisations having a siloed approach, these characteristics were observed in certain areas of the three organisations, where collaboration across teams was occasionally considered important. Despite the varying extent of collaboration and informal mechanisms across the three organisations, it was noted that openness, interaction, participation, mentoring and support of the collaborative risk cultural environment and informal mechanisms enabled participants to place a higher value on risk management because they were provided with the opportunity to discuss a broader range of risks and their implications and solutions in decision-making activities. Flexibility in and customisation of risk management were encouraged through members’ participation in risk discussions and undertaking informal risk assessments in everyday riskwork.

Contrary to prior research (Arena et al., 2017; Jordan et al., 2013, 2016), which discusses the role of formal and visual risk management mechanisms (such as risk workshops, risk champion networks, risk maps and risk matrices) in creating shared contexts and flexible self-management needed for decision-making, this study found that the characteristics of a collaborative risk cultural environment and informal risk mechanisms had similar effects in managing risk. Participants described that informal risk assessments led to some members challenging and reorganising their own perceptions. In addition, risk conversations and open interactions resulted in some members debating different views and seeking better risk strategies.
9.3.3 The tension arising from the need to balance different risk cultural environments and mechanisms

This section discusses how the interplay between the risk cultural environments and risk mechanisms creates tension, which may lead to fragmentation of BUAs and members’ use of risk management in decision-making. Efforts by organisational members to balance these different risk cultural environments and mechanisms and the effect of the resulting tension on their BUAs and their use of risk management in decision-making is discussed.

Arena et al. (2017) highlights the difficulty in balancing ‘robustness’ and ‘plasticity’ in risk management. Where there is a prevalence of robust components, risk management tends to have a poor suitability to local needs. Conversely, if plasticity dominates, risk management becomes indistinguishable from organisational controls in that members become unaware that they are managing risks because risk management is so embedded in their operating processes. A similar tension was observed in the case study organisations where members struggled to balance the controlling environment and formal mechanisms with the collaborative environment and informal mechanisms.

In situations dominated by a controlling environment and formal mechanisms, when dynamic risk management is required in everyday tasks, such as operations requiring immediate and urgent decisions, members considered a collaborative risk cultural environment and informal mechanisms to be a solution to their organisational risk management branding. This tension was particularly noted in Organisations B and C, where members considered formal risk

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8 Arena et al. (2017) draws the notions of ‘robustness’ and ‘plasticity’ from Bowker and Star (1999), Star and Griesemer (1989) and Star (1989) where ‘boundary objects are plastic enough to adapt to local needs and yet robust enough to maintain a common identity across sites’ (p. 78).
assessment as a documentation exercise but discussed risk information informally with their team members.

The interplay between the controlling and the goal-oriented risk cultural environment was also noted in Organisations B and C. While the controlling environment focused on rules and structures to ensure that organisational members managed risks, the goal-oriented risk cultural environment emphasised performance and outcomes to motivate members to manage risks. Some participants in Organisation B and C commented that, because of these different characteristics, members in certain operational areas struggled to find a balance between managing the substance of risk in their day-to-day jobs, achieving their operational goals and meeting the requirements of formalised risk management. That is, these members perceived that ‘getting the job done’ was hindered by rules, structures and formal mechanisms focused on documentation. Interestingly, certain participants pointed out that these rules, structures and formal mechanisms were used to transfer decision-making to upper-level managers or other teams when faced with difficult decisions because the characteristics of a controlling environment created clearer boundaries of accountability and responsibility.

The tension between the characteristics of the controlling and innovative risk cultural environments was frequently mentioned by participants. The characteristics of the innovative risk cultural environment in the public sector include responsible risk-taking, incremental improvements, refinements and modifications (ANAO, 2009) and member empowerment in decision-making. These characteristics can help shape and implement effective policies and programs and facilitate the innovative administration of organisations (ANAO, 2009). However, these aspirations were not observed in actual practice in the case organisations that had a strong controlling risk cultural environment. Participants strongly desired the characteristics of the innovative risk culture, such as responsible risk-taking, to change members’ BUAs about the usefulness of risk management in decision-making.
In light of the tensions discussed above, it appears that public sector regulators’ demands and expectations for risk management design to be ‘fit-for-purpose’ (ANAO, 2011; Department of Finance, 2014), to develop different approaches to managing risks depending on the types of risks (ANAO, 2014a, 2014b) and to adopt innovative practices (ANAO, 2009; McPhee, 2005a; McPhee, 2006a) may not be easily embedded into organisations or coexist with prevailing risk cultural environments. The findings of this thesis indicate that any efforts to formalise risk management with rules that aim to customise different approaches or to implement new or improved innovative initiatives for decision-making may not be easily accepted or adopted by members who experience the aforementioned tensions.

Members whose BUAs were favourable towards the usefulness of risk management in decision-making worked effectively with the characteristics of collaborative and innovative risk cultural environments and informal mechanisms to make risk management meaningful in their day-to-day jobs. Hence, it is important to address the balance between different cultural environments and risk mechanisms to influence members’ BUAs positively towards the usefulness of risk management and to facilitate members’ use of risk management in decision-making.

9.3.4 Other influences

This study also found three other potential influences on members’ BUAs and their use of risk management for decision-making: 1) the leadership role of executives and senior management; 2) the localising role of middle management; and 3) the types and severity of risks.

9.3.4.1 The leadership role of executives and senior management

Participants from the three organisations commented that both explicit or implicit BUAs and behaviours of executives and senior management influenced operators’ BUAs and their use of
risk management. In particular, where communications and interactions with senior management and executives primarily involved mandatory rules and the formalisation of risk management, rather than focusing on making risk management relevant to operators, this tended to lead to a fragmentation of members’ BUAs in certain operations.

In cases where executives and senior management emphasised the importance of risk management in decision-making while exhibiting behaviours and attitudes that failed to correspond to their official statements, members were sceptical about the usefulness of risk management in their day-to-day jobs. For example, many participants from the three organisations were critical that, although the aspirational beliefs and values of senior management supported innovation, operational members perceived that risk-taking was not encouraged when they made decisions. Rather, they perceived that the executive group would not accept any level of risk, despite the moderate risk appetite and tolerance statements documented in corporate reports.

On the contrary, when executives and senior management showed their support for risk management for particular purposes and exhibited their use of risk management, participants were more likely to believe that risk management was beneficial in decision-making processes and used risk management to facilitate decision-making. For example, in Organisation D, executives and senior management influenced certain middle managers to frame their discussions in managing risk with their teams in a similar way.

Role modelling by executives and senior management was, therefore, considered important in cultivating organisational members’ BUAs and their use of risk management. In organisations that highlight the importance and value of risk management, it was believed that aligning the BUAs and behaviours of executives and senior management with the aspirational beliefs and values of the organisation would send a congruent message to organisational members. The
facilitation of a greater collaborative environment and relevant informal mechanisms by senior management may help to alleviate tensions arising from the need to balance different cultural environments. These findings may be added to those of prior studies (Katzenbach et al., 2012; McPhee, 2002; Protiviti, 2014) regarding the important role of senior management by showing that the alignment of executive BUAs and use of risk management with organisational values may facilitate a more effective risk culture and enhance the use of risk management in decision-making.

9.3.4.2 The localising role of middle management

Operators from all three organisations considered managers and team leaders to be experts in risk management for everyday decision-making because they functioned as a conduit between the executive group and operational members. This role was considered important in dispersing favourable BUAs and making risk management relevant to operational members’ daily decision-making. Therefore, this thesis extends the concept of ‘risk experts’ (Themsen and Skæbæk, 2018) who ‘carve out a space for risk management’ (Arena et al., 2010) to middle management, who can disseminate and localise risk management across the organisation.

Middle management and team leaders were considered specialists in identifying risk in their areas and making task-based risk decisions. This role was briefly observed by Power (2016). Since the size of the risk management functions in each of the three case organisations was relatively small and they primarily focused on governance, corporate reporting, serving the audit committee, supporting operations or taking a ‘business partnering’ approach (Kaplan and Mikes, 2016), the discussion and actual management of job-specific risks tended to occur with operational managers or team leaders who were more active in risk management. For example, where managers included operators in daily task-related risk discussions or requested risk information for specific, contemporary issues, team members were more likely to consider a
broader range of risks and solutions. Extending from the discussions of Kaplan and Mikes (2016) and Themsen and Skæbæk (2018), this thesis, therefore, highlights that more ‘risk-aware’ managers could fill the gap by undertaking ‘risk talk’ (Mikes, 2016) on an ad hoc basis, as they are considered more influential in changing members’ BUAs regarding the usefulness of risk management.

9.3.4.3 Types and severity of risks

Members across the three different organisations faced different types and severity of risks arising from day-to-day decision-making. In particular, the primary day-to-day decision-making activities in Organisations C and D involved considering risks associated with safety of staff and the public. In these two organisations, members who were engaged in decision-making in core operations commented that they experienced dynamic situations where decisions had to reflect constant changes in context and that these changing consequences needed to be continually monitored. As risks may be related to injury or loss of life, organisational members evaluated them as high. In Organisation B, day-to-day decision-making focused more on establishing and facilitating systems for an important Australian national asset. Members involved in decision-making in core operations tended to engage with risks statically from planning, prioritising and monitoring perspectives. The consequences of these risks occurring could result in damage to the reputation of Organisation B through, for example, court cases. These static types and levels of risks in Organisation B tended to drive organisational members to consider risks in a more bureaucratic way.

These different types and severity of risks affected how organisational members considered the usefulness of risk management in their jobs. Where the type of risk was related to safety and the consequences were potentially serious, as in Organisations C and D, members took risk management more seriously but were less likely to use formal risk management terms and
techniques. However, in Organisation B, where risk was static, apart from criticising the existing bureaucratic risk management practice in their decision-making processes, members expressed that they wished to have the opportunity to engage with risk responsibly to enhance the quality of services provided to clients.

This thesis found that the effects of the types and severity of risks could be subject to organisation-specific risk cultural environments and risk management mechanisms on members’ BUAs and their use of risk management. Although members in both Organisations C and D dealt with risks relating to human safety in their day-to-day decision-making, the lack of the relevance of rules and formalisation resulted in members of Organisation C having a different view to members of Organisation D on the usefulness of risk management.

9.4 Summary of Chapter 9

This chapter discussed and compared the three case study organisations with respect to their members’ BUAs and use of risk management, and how the characteristics of their risk cultural environments and risk management mechanisms influenced their BUAs and use of risk management.

Similarities were found regarding risk management for compliance and assessment of downsides. That is, integrated BUAs, as well as the use of risk management for these purposes, were observed across the three organisations. With the characteristics of the strong controlling risk cultural environment and a standard set of formal risk management mechanisms, participants were aware of the importance and value of risk management for these purposes. However, they also pointed out the negative issues. In risk management for compliance, rules, controls, formalisation, standardisation and conformity to rules could result in negative effects associated with generic risk management, which in turn negatively affected members’ BUAs.
A lack of job relevance and customisation arising from a generic risk management approach led some members to believe that risk management was a box-ticking exercise. The pursuit of predictability, stability and dependable delivery influenced members in a negative way because it tended to prevent members from thinking critically or creatively in making decisions. Also, risk aversion, avoidance of risk-taking and protection of organisational reputation gave members the impression that risk management was aimed at avoiding risk or transferring risk to other parties instead of managing the actual substance of risk. These negative effects ‘branded’ risk management as nothing more than completing generic templates and the adoption of technical terms and methods.

In relation to risk management for decision-making, differentiated and fragmented BUAs were found and risk management was used less for this purpose. Where risk management was adopted in decision-making, members were more likely to manage risk using processes that exhibited the characteristics of the collaborative risk culture and informal mechanisms. This phenomenon was mainly found in Organisation D. Sharing risk information, openness, interaction, participation, mentoring and support influenced members’ BUAs and their use of risk management by providing shared understanding, common languages, different opinions, flexibility and job relevance for members to make everyday decisions.

Further, difficulties were noted in balancing the different risk cultural environments and formal and informal mechanisms. Members’ BUAs were influenced by the interplay between the characteristics of the controlling risk cultural environment and formal mechanisms and those of the collaborative, goal-oriented and innovative risk cultural environments and informal mechanisms. The tension experienced by members implies that fit-for-purpose risk management suggested by public sector regulators may not be easily achievable for public sector organisations.
The thesis also found that the leadership role of senior management is important for providing direction for BUAs and behaviours towards risk management and for facilitating collaborative, innovative and goal-oriented risk cultural environments and informal risk mechanisms. This could potentially help to balance the aforementioned tensions. The localising role of middle management is also crucial in facilitating ‘risk talk’ (Mikes, 2016) and making risk management relevant to members’ day-to-day jobs. Types and severity of risks were also found to influence members’ BUAs and their use of risk management.
Chapter 10: Summary and conclusion

10.1 Introduction

This chapter concludes the thesis by providing a summary of the research question and the major findings, discussing the implications of the findings for literature and practice, identifying the limitations of the study and highlighting opportunities for future research.

10.2 Summary of the research question and major findings

This thesis examined the research question ‘How does risk culture influence the use of risk management in decision-making in the public sector?’ Given the various aspirations around risk management in government agencies, risk culture is increasingly being recognised as an important factor influencing risk management in the Australian public sector (ANAO, 2009; Barrett, 2001b, 2003; McPhee, 2006a).

The research question was addressed using an analytical framework based on the organisational culture literature to analyse organisational members’ thoughts and attitudes towards risk cultural environments and risk management mechanisms. The framework enabled an analysis of the different levels of risk culture and the characteristics of risk cultural environments and risk management mechanisms. In particular, organisational members BUAs were explored through three perspectives, integration, differentiation and fragmentation, and how they related to the use of risk management. Unlike previous studies in risk management, which tended to focus on the BUAs of risk experts or senior management, the study presented in this thesis also examined the BUAs of operator groups in organisations. The thesis also analysed how the prevailing risk cultural environment and risk mechanisms influenced members’ BUAs and their
use of risk management for particular purposes, and the tensions that arose from the coexistence of different risk cultural environments and mechanisms within organisations.

The research was undertaken using a two-stage approach. In Stage 1, interviews and document analysis of four government agencies were conducted to refine the analytical framework adopted for the study and provide inputs into the development of an appropriate questionnaire and interview questions for Stage 2. Stage 2 investigated the research question using a case study approach involving three public sector organisations. Data for the case studies were obtained using a questionnaire survey, interviews and reviews of internal and external documents.

Analysis of the data from Stage 1 revealed that members’ BUAs and their use of risk management could be related. It was also noted that when organisational members explained their risk culture and risk management practices, they described them based on the effects of the particular characteristics of risk cultural environments and risk mechanisms. This indicated that risk cultural environments and risk mechanisms could play a role in influencing their beliefs, implying that the analytical framework was appropriate to explore risk management in the public sector.

In Stage 2, the risk cultures and risk management of three organisations were analysed. Organisation B displayed differentiated and fragmented BUAs in risk management for making strategic or operational decisions and the development and implementation of policy or providing advice, and risk management was used less frequently in these areas. With its strong controlling risk culture and its standard set of formal mechanisms, risk management was embedded in core operational processes, such as approval of applications, which appeared to lead to the BUAs that risk management was useful for accountability, compliance, governance and assessing downsides, but not in decision-making. In contrast, some participants who
responded that risk management had been useful in decision-making tended to experience the benefits of risk management primarily through shared knowledge and informal discussions about risk management, which are characteristics of the collaborative environment.

Differentiated and fragmented BUAs were also found in Organisation C, in which risk management was used less frequently in strategic decision-making and the development and implementation of policy or providing advice. Organisation C had a much stronger controlling risk culture and a greater use of formalised risk mechanisms than the other two organisations. Under the influence of these characteristics, members believed that risk management was a box-ticking and defensive exercise and a blame environment was evident in the organisation. Those members who believed that risk management was useful in decision-making largely worked with informal risk assessments or had interactive risk conversations with their team members.

In contrast to Organisations B and C, members in Organisation D did not have differentiated BUAs. However, similar to Organisations B and C, fragmented BUAs were observed in risk management in decision-making. Again, the presence of the strong controlling risk culture and formal mechanisms influenced members’ BUAs and their use of risk management to be risk-averse or to manage risk in a conservative way. Despite this, compared with the other two organisations, Organisation D had a greater collaborative risk culture and an increased prevalence of informal mechanisms such as risk conversations and learning from risk management role models and past experience. Under such characteristics, it was found that relatively more members in Organisation D, in particular those from operator groups, thought that risk management was useful in decision-making.

Integrated BUAs in risk management for compliance and assessment of downsides were observed across the three organisations, and risk management was used similarly in these areas.
Under the characteristics of the strong controlling risk culture and a standard set of formal risk management mechanisms, participants valued accountability, governance, complying with internal or external requirements and preventing undesirable events. However, the negative aspects associated with generic risk management were also reinforced by these characteristics. Rules and controls, formalisation, standardisation and conformity to rules could adversely affect members’ BUAs, contributing to the practice of generic risk management in the three organisations. Negative characteristics of the controlling environment and formal mechanisms, such as the onerous and standardised processes and the lack of job relevance and customisation, resulted in some members having the BUA that risk management was nothing more than a box-ticking exercise. The excessive focus on predictability, stability and dependable delivery in controlling risk cultural environments and formal mechanisms influenced members in a negative way, since this type of risk management limited opportunities for members to consider risk critically or innovatively in decision-making. Risk aversion, avoiding responsible risk-taking and reputation management led members to believe that risk management meant avoiding or transferring risk to other parties, rather than managing the substance of risk. These adverse effects ‘branded’ risk management as conformity to completing generic templates and adoption of technical terms and methods.

Further, fragmented BUAs regarding the usefulness of risk management in decision-making were observed and risk management was used to a lesser degree for this purpose across the three organisations. These concerns regarding fragmented and siloed attitudes in the public sector, which were raised more than a decade ago (Barrett, 2003), still exist. Fragmented BUAs were likely to result from different cultural environments and mechanisms within organisations. The characteristics of a strong controlling environment and formal mechanisms influenced members’ BUAs and the use of risk management through stringent rules and standards and business plans and operational processes embedded with risk management components. This
resulted in members believing that risk management was only for compliance and accountability rather than for decision-making (Organisation B), that risk management was a box-ticking exercise and was not useful in decision-making (Organisation C) or that risk was to be managed in a conservative way (Organisation D). In contrast, the existence of a collaborative environment and informal mechanisms, though relatively weak in Organisations B and C, provided members with a shared context, a common language, various opinions, flexibility, customisation and job relevance in managing risk, facilitating a more positive attitude towards the usefulness of risk management in decision-making. This situation was most evident in Organisation D.

The results also highlighted the difficulties for organisational members to balance the conflicting characteristics of different risk cultural environments and risk mechanisms. Specifically, tension was found in balancing the characteristics of the controlling risk culture and formal mechanisms and the collaborative and innovative risk cultures and informal mechanisms, thus influencing the way that members thought about risk management and their use of risk management in decision-making. This tension indicates that fit-for-purpose risk management, as suggested by public sector regulators, may not be easily accepted or adopted by organisational members in the public sector.

This thesis also revealed the important roles played by upper and middle management. The modelling of risk management by executives and senior managers could help alleviate tensions arising from attempting to balance different environments and mechanisms, align their organisation’s aspirational espoused beliefs and values with their own BUAs and behaviours, and facilitate stronger collaborative, innovative and goal-oriented environments and informal mechanisms. In day-to-day risk management, more ‘risk-aware’ middle managers tended to fill the gap by undertaking ‘risk talk’ (Mikes, 2016) and were considered more influential in positively influencing members’ BUAs towards the usefulness of risk management in decision-
making. The types and severity of risks were also found to have an influence on members’ BUAs and their use of risk management in daily decision-making.

Overall, this thesis focuses on organisational members’ BUAs in analysing an organisation’s risk culture. The findings of this thesis address the research question by showing how differentiated and fragmented BUAs of organisational members are related to the use of risk management in decision-making. To further understand members’ BUAs, the thesis also shows how two artefacts, risk cultural environment and risk management mechanisms, may shape members’ BUAs, and, in turn, their use of risk management. The analysis indicates that a stronger goal-oriented, collaborative and/or innovative risk cultural environments and the greater use of informal risk mechanisms may positively influence members’ BUAs about the usefulness of risk management in decision-making and their use of risk management for this purpose. Upper and middle management may play an important role in facilitating this process.

10.3 Implications

This section discusses the implications of the findings for the literature on risk culture, risk management and decision-making, as well as the implications for practice.

10.3.1 Implications for the literature

Two streams of research have provided different views on everyday risk management practices. The first stream, primarily involving practitioner literature in both the private and public sectors, largely posits a normative focus on congruent and integrated beliefs and attitudes in an organisation, which can lead to effective risk management and better decision-making (Farrell and Hoon, 2009; Protiviti, 2012, 2013, 2014; Bank Governance Leadership et al., 2014). The
other stream of research focuses on exploring everyday risk management, observing that the use of risk management appears to happen with more diverse thoughts and attitudes held by members (Arena et al. 2017; Jordan et al. 2018; Power, 2016a). By exploring how risk culture could influence the use of risk management through the analysis of members BUAs, risk cultural environments and risk management mechanisms, the findings of this thesis appear to be more consistent with the latter stream of research. Where differentiated or fragmented BUAs exist, a greater use of risk management in decision-making could be encouraged by employing informal mechanisms and characteristics of the collaborative risk cultural environment, such as openness, participation, interaction, support and mentoring, which facilitate favourable BUAs towards the usefulness of risk management and its use. These characteristics enable the sharing of risk information, create common understanding of contexts and prompt alternative views, enabling flexibility and customisation. The findings of this thesis, therefore, contribute to the view of everyday risk management practices by providing empirical evidence that differentiated or fragmented BUAs exist across different public sector organisations, and the interplay between BUAs, collaborative risk cultural environment and informal risk mechanisms is likely to facilitate the use of risk management for decision-making.

Second, the prior research in risk management has largely focused on risk management practices, such as the role of risk technologies (Jordan et al., 2013; Palermo, 2016), risk objects (Boholm and Corvellec, 2016; Arena et al., 2017) and risk experts (Hall et al., 2015; Kaplan and Mikes, 2016; Themsen and Skærbæk, 2018). This stream of research primarily investigates formal artefacts, including the characteristics of a controlling risk cultural environment and formal risk management mechanisms. This thesis found that members’ BUAs towards the usefulness of risk management in decision-making tends to be more positive with the use of informal mechanisms. In addition, the results revealed how informal risk experts, such as middle management or team leaders, were influential in everyday risk management because
they facilitated ‘risk talk’ among team members (Mikes, 2016) and informal risk assessments in a job-relevant and flexible context (Carlsson-Wall et al., 2019). Therefore, this thesis expands on insights from the previous literature by showing that informal risk experts could complement formal artefacts in influencing different organisational members’ thoughts.

Third, in addition to examining the BUAs of the executive group, this thesis explored day-to-day risk management in the public sector from the perspective of operational groups to provide the views of those who are ‘less powerful and marginalised’ (Martin, 2001, p. 10). The thesis examined how an overall organisation’s risk culture is ‘operationalised’ (Power et al., 2013, p. 76) rather than simply describing managerial aspirations as seen in much of the prior research (Mikes, 2008; Kaplan and Mikes, 2016). To do this, a survey of many members across different teams from operational groups was intentionally arranged. Indeed, it was found that, in organisations where executive group participants provided their aspirational views on their organisation’s risk management practices, there was a difference between their BUAs and those of the operator groups. Certain interviewees from operator groups had BUAs that were in conflict with those of the executive group, providing evidence of differentiated or fragmented BUAs on the usefulness of risk management in decision-making. Therefore, this thesis adds to the prior research by including diverse levels and functions of organisational members and providing a more holistic picture of organisational risk cultures.

10.3.2 Implications for practice

The normative risk management beliefs and values promoted by governments and practitioners indicate that integrated BUAs about the usefulness of risk management could benefit public sector organisations (ANAO, 2014; Barrett, 2003; NSW Treasury, 2012; WA PSC, 2009). The
findings of this thesis highlight at least two implications for these normative espoused beliefs and values in the context of public sector risk management.

First, certain risk management practices in the public sector have been criticised for focusing on box-ticking, risk aversion, transferral or avoidance of risk to avoid blame, and complying with auditable documents, rather than managing the actual substance of risk (Hood, 2002; Power, 2007, 2009). While this thesis found that the majority of participants recognised the importance and value of risk management and used it for accountability, transparency, governance and assessing downsides, the negative effects of risk management for these purposes were also found, manifested as box-ticking, defensive risk management as well as risk aversion, which were reinforced by the characteristics of a strong controlling risk culture and formal mechanisms. Subsequently these manifestations of risk management were recognised as the organisation’s risk management ‘brand’, which has not been helpful in the implementation of risk management in decision-making across public sector organisation. Hence, the findings of this thesis highlight that the negative effects of risk management for compliance and assessment of downsides appear to continue in the Australian public sector, despite the promotion of a positive risk culture by the government as a way of integrating risk management in the decision-making process.

Second, as noted in Arena et al.’s (2017) discussion on the difficulty of balancing ‘robustness’ and ‘plasticity’ of risk management, the findings of the thesis revealed the difficulty in balancing the characteristics of the controlling risk cultural environment and formal mechanisms with those of the collaborative and innovative environments and informal mechanisms. While public sector regulators have promoted risk management to be ‘fit-for-purpose’ (ANAO, 2011; Department of Finance, 2014), to have different approaches to manage risks depending on the types of risks (ANAO, 2014a, 2014b) and to be part of innovation initiatives (ANAO, 2009; McPhee, 2005a; McPhee, 2006a), these aspirations may not be easily
adopted by organisational members under the prevailing characteristics of a controlling risk cultural environment and formal mechanisms. On the other hand, the thesis results show how organisational members have different thoughts and beliefs toward risk management and use risk management differently due to risk cultural environments and risk mechanisms, and how these contribute to strategic and everyday decision-making. Such findings highlight that more positive attitudes towards the usefulness of risk management could be encouraged by fostering a collaborative risk environment and an increased use of informal mechanisms. Both upper and middle management could play an important role in driving this process. Therefore, the findings of this thesis provide insights into the interplay between different risk cultural environments and risk management mechanisms and the potential implications of promoting a positive risk culture and integrating risk management into decision-making in public sector organisations.

10.4 Limitations of the study

This section discusses the limitations of this study. First, the use of case studies means that findings are not necessarily generalisable. Each of the three case organisations had a different setting and different core operations. The limited sample size means that caution should be used in generalising the findings to other public sector organisations.

Second, this thesis focuses on two levels of organisational members, executives and operators. This design was to ensure that risk culture was explored holistically, rather than assuming that the espoused beliefs and values of organisations, risk experts or management constituted a risk culture. This research design inevitably resulted in a reduced sample size of each group of participants.

Third, there are limitations associated with data collection because of the restrictions associated with studying Australian public sector organisations. Therefore, the empirical evidence of this
thesis was limited to the accessibility of data sources provided by each organisation. Access to research participants was subject to the approval of the head of each organisation in terms of the number and distribution of questionnaires and selection of interviewees. This resulted in a potential unidentified selection bias and issues associated with the openness of participants.

Lastly, semi-structure interviews were adopted to allow interviewees to provide their thoughts freely and openly. However, a number of participants conveyed their views regarding the usefulness and use of risk management at the same time. This resulted in difficulty separating the analysis of the effects of risk cultural environments and risk management mechanisms on members’ BUAs and these effects on the use of risk management. Nevertheless, the effects on BUAs and the use of risk management were identified as far as possible.

10.5 Opportunities for future research

The results and the limitations of the study highlight the following opportunities for future research. First, the cultural analytical framework could be applied in a long-term, issue-specific context to investigate how organisational members’ BUAs and their use of risk management could evolve with risk cultural environments and risk management mechanisms. For example, the continual investigation of risk culture and risk management in end-to-end projects would enhance the understanding of how the characteristics of different environments and mechanisms interplay and influence members’ BUAs and risk management from its inception to completion. This would also help in exploring the relationship between members’ BUAs and their use of risk management in a controlled environment to provide further insights into how risk culture may influence risk management practices.

Second, while this study focused on the scope of members BUAs, risk cultural environments and risk mechanisms within organisations, it was noted during data collection that external
factors, such as an interlinkage between risk culture and institutional environment around government agencies, or relationships with the community, other government agencies, regulators and other political powers, were described by participants. Examining how external stakeholders’ BUAs interact with internal risk cultural environments, risk mechanisms and members’ BUAs could add to the knowledge about the use of risk management for particular purposes.
References


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Cameron, K. S. and Quinn, R. E. (2011) Diagnosing and changing organisational culture:
*Based on the competing values framework*, Jossey-Bass, San Francisco.


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EY Global Regulatory Network (2014) ‘Global Regulatory Network Executive Briefing Assessing risk culture — questions firms should be asking’.


sector management must evolve”, Australian National Audit Office, August.


The Institute of Internal Auditors (2010) ‘Internal Audit’s Role in Promoting a Positive Tone @ the Top’, *Austin Chapter Research Committee*.


### Appendix 1. List of interview questions for Stage 1

1. Could you please describe your main responsibilities?

2. What does risk management mean to you?

3. What are the main risks faced by your organisation?

4. Does your organisation have a risk management framework?

5. Why do you think your organisation decided to have a risk management framework?

6. Why do you think your organisation does not have one? Do you think your organisation needs one?

7. Do you use risk management in carrying out your duties?

7a. Could you please give some examples?

7b. How about your team members? Do your team members use risk management in carrying out their duties?

7c. Could you please give some examples? (Give examples and ask whether the interviewee has done these types of risk management activities in carrying out one's duties.)

8. Do you or your team members use risk management for making decisions?

8a. If yes, could you please provide some examples?

9. Why did you adopt risk management for xxx (each example given in the interview)?

10. What is the process that you use for applying risk management to xxx?
11a. Do you have formal meetings discussing risk management? Or is risk management a regular agenda item in other meetings (WHS)?

11b. Who decides the agenda of the risk management meeting? What purpose does the meeting/agenda item serve?

11c. Who participates in the meeting?

11d. What is the escalation process - risks elevated to be reported to the appropriate level?

11e. What is the reporting process?

11f. How do you or your team discuss risks in general? How do you or your team communicate risks and strategies to manage risks? Meetings or other communications? Formal or informal?

11g. Have you encountered any issues or difficulties adopting risk management practices or applying risk management processes to your work activities?

11h. If so, what were those issues or difficulties?

11i. How do you or your team address or resolve identified issues or difficulties associated with risk management?

12. What is your view about risk management in your organisation?

13. What are management's thoughts towards risk management?

Prompts: Does management request for risk analysis when making decisions? Does management often highlight the importance of risk management in meetings or emails? Does management communicate any information about risk management - if so, what messages
are normally communicated formally or informally? Is there a greater level of commitment to the allocation of resources?

14. What are your team members’ thoughts towards risk management?

Prompts: What does the risk office think of how risk management should be? Do members undertake risk management voluntarily? Why would members perform risk management if they are not required?

15. Are there any organisational policies to manage risk?

16. Are these policies helpful to perform risk management? Why or why not?

17. How do you think the organisational members develop a consistent understanding of risk management? How do you embed risk management into the department’s daily activities?

18. How practical do you think these policies are? Why is it practical or not practical?

19. Does management support the organisational risk management policy? If so, how do they express the support or non-support? What actions are carried out to support these policies?

20. Do your team members support the organisational risk management policies? Please describe examples where members support these policies. What actions are carried out to support these policies?

21. What are the implications if these policies are not followed?

22. Do you see any improvements to be made for these policies to better manage risks?

23. Are there any other mechanisms (methodologies and tools) that we have not covered?
24. Do you have any methodologies and tools to enable effective management of risk across the department? E.g. Risk management Helpdesk, a reference suite of risk management documents, e-training, central risk register

25. Are these mechanisms helpful to perform risk management? Why or why not?

26. What do you think about the practicality of these mechanisms? Why is it practical or not practical?

27. Do you see any improvements that can be made to these mechanisms to better manage risks?

28. Do you think these mechanisms are in line with the policies we discussed before?

29. Are there any information mechanisms to manage risks? e.g. social visits, ad hoc meetings, impromptu telephone discussions, and e-mail exchanges

30. How do these mechanisms work to manage risk? (note: additional questions will be asked where informal mechanisms are not mentioned during the interview)

31. What are your views on the effectiveness of these formal and informal mechanisms? Among the mechanisms mentioned, which one(s) are more effective? Why?

32. Are there any other factors that facilitate or hinder you or your team members from incorporating risk management into making decisions? Any additional mechanisms that could be helpful, but the department does not have yet?

33. Organisational specific questions

34. Do you have anything else you want to add? Any general comments?
Appendix 2. List of participants for Stage 1 interviews

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Organisation</th>
<th>Subculture Group</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1)</td>
<td>Alpha</td>
<td>Executive group</td>
<td>65 mins</td>
</tr>
<tr>
<td>2 1)</td>
<td>Alpha</td>
<td>Executive group</td>
<td>65 mins</td>
</tr>
<tr>
<td>3</td>
<td>Alpha</td>
<td>Operator group</td>
<td>45 mins</td>
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<tr>
<td>4</td>
<td>Beta</td>
<td>Executive group</td>
<td>54 mins</td>
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<tr>
<td>5</td>
<td>Beta</td>
<td>Executive group</td>
<td>64 mins</td>
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<tr>
<td>6</td>
<td>Beta</td>
<td>Operator group</td>
<td>56 mins</td>
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<tr>
<td>7</td>
<td>Beta</td>
<td>Operator group</td>
<td>63 mins</td>
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<tr>
<td>8 2)</td>
<td>Gamma</td>
<td>Operator group</td>
<td>48 mins</td>
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<tr>
<td>9 2)</td>
<td>Gamma</td>
<td>Operator group</td>
<td>48 mins</td>
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<tr>
<td>10</td>
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<td>Executive group</td>
<td>66 mins</td>
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<tr>
<td>11</td>
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<tr>
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<td>Gamma</td>
<td>Executive group</td>
<td>65 mins</td>
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<tr>
<td>13</td>
<td>Gamma</td>
<td>Operator group</td>
<td>44 mins</td>
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<tr>
<td>14</td>
<td>Delta</td>
<td>Executive group</td>
<td>54 mins</td>
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<tr>
<td>15</td>
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<td>Executive group</td>
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<tr>
<td>17</td>
<td>Delta</td>
<td>Operator group</td>
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<tr>
<td>18</td>
<td>Delta</td>
<td>Operator group</td>
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<tr>
<td>19</td>
<td>Delta</td>
<td>Operator group</td>
<td>50 mins</td>
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<tr>
<td>20</td>
<td>Delta</td>
<td>Operator group</td>
<td>45 mins</td>
</tr>
</tbody>
</table>

1) Reference no. 1 and 2 participants were in the same interview.

2) Reference no. 8 and 9 participants were in the same interview.
Appendix 3. List of participants for Stage 2 interviews

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Organisation</th>
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<tbody>
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<td>1</td>
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<td>80 mins</td>
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<td>2</td>
<td>B</td>
<td>Executive group</td>
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<td>3</td>
<td>B</td>
<td>Executive group</td>
<td>61 mins</td>
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<tr>
<td>4</td>
<td>B</td>
<td>Operator group</td>
<td>50 mins</td>
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<tr>
<td>5</td>
<td>B</td>
<td>Operator group</td>
<td>61 mins</td>
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<tr>
<td>6</td>
<td>B</td>
<td>Operator group</td>
<td>30 mins</td>
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<tr>
<td>7</td>
<td>B</td>
<td>Operator group</td>
<td>48 mins</td>
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<tr>
<td>8</td>
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<td>Operator group</td>
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<tr>
<td>9</td>
<td>C</td>
<td>Executive group</td>
<td>44 mins</td>
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<td>10</td>
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<td>Operator group</td>
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<tr>
<td>11</td>
<td>C</td>
<td>Operator group</td>
<td>45 mins</td>
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<tr>
<td>12</td>
<td>C</td>
<td>Operator group</td>
<td>40 mins</td>
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<tr>
<td>13</td>
<td>C</td>
<td>Executive group</td>
<td>41 mins</td>
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<td>14</td>
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<td>Operator group</td>
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<td>15</td>
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<td>16</td>
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<td>Executive group</td>
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<td>Operator group</td>
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<td>19</td>
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<td>Executive group</td>
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<td>Operator group</td>
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<td>21</td>
<td>C</td>
<td>Executive group</td>
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<td>22</td>
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<td>Operator group</td>
<td>52 mins</td>
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<tr>
<td>23</td>
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<td>Operator group</td>
<td>58 mins</td>
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<td>24</td>
<td>D</td>
<td>Executive group</td>
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<td>D</td>
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<td>Executive group</td>
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<td>27</td>
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<td>Operator group</td>
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<td>31</td>
<td>D</td>
<td>Executive group</td>
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<td>Operator group</td>
<td>68 mins</td>
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<td>33</td>
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<td>Operator group</td>
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<td>D</td>
<td>Operator group</td>
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Appendix 4. List of indicative interview questions from Stage 2

**Interview Questions**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>What are your main responsibilities and how long have you been working in this role?</td>
<td></td>
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<tr>
<td>What does risk management mean to you?</td>
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<tr>
<td>What are the main decisions you make in carrying out your duties? Is risk management used in these decisions?</td>
<td></td>
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<tr>
<td>Is risk management useful for carrying out your duties? Why or why not?</td>
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<tr>
<td>Do your team members use risk management in carrying out their duties?</td>
<td></td>
</tr>
<tr>
<td>Do you think your team members find risk management useful for carrying out their duties? Why or why not?</td>
<td></td>
</tr>
<tr>
<td>How would you describe risk culture in your organisation?</td>
<td></td>
</tr>
<tr>
<td>What risk management mechanisms are available in your organisation?</td>
<td></td>
</tr>
<tr>
<td>Are these mechanisms used formally or informally?</td>
<td></td>
</tr>
<tr>
<td>Do you use these mechanisms when you make decisions for your work and how are these mechanisms used?</td>
<td></td>
</tr>
<tr>
<td>What are your views on the effectiveness of these mechanisms?</td>
<td></td>
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<tr>
<td>Do you think your organisation’s risk culture and the mechanisms that you mentioned help you to understand</td>
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<tr>
<td>- your executives’ thoughts,</td>
<td></td>
</tr>
<tr>
<td>- your colleagues’ thoughts</td>
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<tr>
<td>about risk management in your organisation?</td>
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<tr>
<td>Do you share the same views as</td>
<td></td>
</tr>
<tr>
<td>- your executives’ views,</td>
<td></td>
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<tr>
<td>- your colleagues’ views</td>
<td></td>
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<tr>
<td>about risk management?</td>
<td></td>
</tr>
<tr>
<td>Do you think the characteristics of risk culture and the risk management mechanisms help you to share the same views as</td>
<td></td>
</tr>
<tr>
<td>- your executives’ views,</td>
<td></td>
</tr>
<tr>
<td>- your colleagues’ views</td>
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<tr>
<td>Do you think your organisation’s risk culture and the mechanisms that you mentioned help you to use risk management for decision making?</td>
<td></td>
</tr>
<tr>
<td>Are there any other characteristics of risk culture and other mechanisms that would help you to use risk management for decision making?</td>
<td></td>
</tr>
<tr>
<td>Does your organisation have a risk appetite statement?</td>
<td></td>
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<tr>
<td>Do you consciously translate risk appetite issues into a language which business areas can understand and own?</td>
<td></td>
</tr>
<tr>
<td>Have you implemented the triple lines of defence approach in your organisation?</td>
<td></td>
</tr>
</tbody>
</table>
**Interview Questions**

Do you think this helps with the interaction between the business areas and a risk management function?

In your opinion, what roles should a risk management function carry out in your organisation?

What is the level of interaction and communication between a risk management function and the business areas, and how do you get assurance that a risk management function can deliver supporting decisions in business areas?

Does your organisation share stories of risk management successes and value creation within the organisation and with regulators? Can you provide any examples?

What risk management messages do the executives communicate? How do they communicate these? What is the frequency of their communication? Are these messages effectively communicated to all organisational members?

Do you think your organisational members are proactive in acquiring risk knowledge?

Has the topic of risk culture been discussed in meetings attended by different levels of organisational members?

How do you or your team discuss issues or difficulties associated with risk management?

Do you discuss internally the implications of risk-taking or the implications of your desired level of risk appetite for a particular decision?

Apart from the mechanisms you mentioned, are there any mechanisms that would help you to manage risks?

Are there any mechanisms that may hinder you or your team members from adopting risk management for making decisions?

Do you think risk management activities should be a 'tick the box' or compliance task? Do you know which areas of your organisation just ‘tick the box’ in terms of risk management? Have you considered any ways that can change this?

Do you think any other cultural changes are needed in your organisation? Which mechanisms are most likely to be effective in bringing about that change?
Appendix 5. Questionnaire survey

Risk Culture and the use of Risk Management in the Public Sector

INTRODUCTION

This project relates to risk culture and risk management practices in your organisation.

In this survey, risk management is broadly defined as the identification, assessment & prioritisation of risks (i.e. thinking about risks) and the development & implementation of associated strategies when you perform your tasks. Risk management can be undertaken in a formal and/or informal way.

The questionnaire consists of two sections, A and B. Section A seeks your views regarding risk management practices, and the use and usefulness of risk management. Section B asks for the demographic information.

It should take approximately 20 minutes for you to complete the survey.

Please return this survey using the envelope provided to you. By completing and returning the survey you are giving consent for your response to be included in the project. All information that you provide will remain confidential and will be presented in a summarised form.

If you have any queries or concerns, please contact Yoon Jin Park via email (Yoonjin.Park@anu.edu.au) or telephone (02 6125 5014).

Thank you for participating in this project.

GLOSSARY

Colleagues: Those who you work together irrespective of their levels (excl. executives).

Executives: Those who make strategic decisions for the organisation and/or approve the risk management framework in the organisation.

Risk management function: Those who design the risk management framework and/or provide risk management advice/support in the organisation.
Section A

For each of the following questions, please tick the appropriate box or answer in the space provided.

Part I. Risk Management Mechanisms

1. The following questions asks you about risk management mechanisms that may exist in your organisation and the use and helpfulness of the mechanisms. Please tick “Not Applicable” if your organisation does not have the mechanism(s).

<table>
<thead>
<tr>
<th>Formal Mechanisms: systematic, structured mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Risk management framework</td>
</tr>
<tr>
<td>(ii) Performance management framework that focuses on risk management</td>
</tr>
<tr>
<td>(iii) Business plan that incorporates risk management</td>
</tr>
<tr>
<td>(iv) Risk Management Training</td>
</tr>
<tr>
<td>(v) Risk appetite and tolerance statements</td>
</tr>
<tr>
<td>Mechanism</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(vi) Visual presentation of risks (e.g. risk maps or risk matrices)</td>
</tr>
<tr>
<td>Informal Mechanisms: unwritten, implicit, or casual mechanisms</td>
</tr>
<tr>
<td>(vii) Learning from risk management role models</td>
</tr>
<tr>
<td>(viii) Discussion about risk management outside meetings</td>
</tr>
<tr>
<td>Formal and Informal Mechanisms (Please indicate whether the mechanism is used formally and/or informally)</td>
</tr>
<tr>
<td>(ix) Meetings on risk management</td>
</tr>
<tr>
<td>(x) Email communication about risk management</td>
</tr>
<tr>
<td>(xi) Email communication about risk management (Please indicate whether the mechanism is used formally and/or informally)</td>
</tr>
<tr>
<td>(xi) Intranet communication about risk management</td>
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<td>-------------------------------------------------</td>
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<tr>
<td>(xii) Reporting process about risk management</td>
</tr>
<tr>
<td>(xiii) Brainstorming sessions about risk management</td>
</tr>
<tr>
<td>(xiv) Networking with relevant risk management stakeholders</td>
</tr>
<tr>
<td>(xv) Risk management workshops</td>
</tr>
<tr>
<td>(xvi) Support provided by the risk management function</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
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<tr>
<td>□ Formal</td>
</tr>
<tr>
<td>□ Informal</td>
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<thead>
<tr>
<th>(xvii) Other (please specify) :</th>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
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</thead>
<tbody>
<tr>
<td>□ Formal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>1</td>
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<tr>
<td>□ Informal</td>
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<td>2</td>
<td>3</td>
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</tbody>
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<table>
<thead>
<tr>
<th>(xviii) Other (please specify) :</th>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
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<tbody>
<tr>
<td>□ Formal</td>
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<td>4</td>
<td>5</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>□ Informal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>(xix) Other (please specify) :</th>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
<th>Not at all</th>
<th>Slightly</th>
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<tbody>
<tr>
<td>□ Formal</td>
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<tr>
<td>□ Informal</td>
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<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Part II. Use and usefulness of Risk Management

2. The following questions asks you about the use of risk management. Please tick “Not Applicable” if you do not perform the task.

<table>
<thead>
<tr>
<th>I use risk management to:</th>
<th>How often do you use risk management for the following purposes?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>1   2   3   4   5</td>
</tr>
<tr>
<td>a. prioritise resources</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>b. develop strategies</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>c. implement strategies</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>d. avoid risky activities</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>e. assist with planning</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>f. develop policies</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>g. review policies</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>h. provide advice to stakeholders</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>i. comply with laws and regulations</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>j. monitor regulatory compliance related to my area</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>k. prepare for external uncertainty</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>l. prevent undesirable events</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>m. follow internal policies, procedures and processes</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>n. identify opportunities</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>Other purposes (please specify):</td>
<td></td>
</tr>
<tr>
<td>o.</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>p.</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>q.</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
<tr>
<td>r.</td>
<td>☐   ☐   ☐   ☐   ☐</td>
</tr>
</tbody>
</table>
3. The following questions asks you about the usefulness of risk management. Please tick “Not Applicable” if you do not perform the task.

<table>
<thead>
<tr>
<th>I think risk management is useful when I:</th>
<th>Not Applicable</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. prioritise resources</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>b. develop strategies</td>
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<td>c. implement strategies</td>
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<td>d. avoid risky activities</td>
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<tr>
<td>g. review policies</td>
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<tr>
<td>h. provide advice to stakeholders</td>
<td></td>
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<td>n. identify opportunities</td>
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<tr>
<td>Other purposes (please specify):</td>
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<td>o.</td>
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<td>q.</td>
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<tr>
<td>r.</td>
<td></td>
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</tr>
</tbody>
</table>

Which of the following best describes your thoughts on the **usefulness** of risk management?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Slightly</td>
<td>Moderately</td>
<td>Very</td>
<td>Extremely</td>
</tr>
</tbody>
</table>
Part III. Effect of Risk Mechanisms

4. The following questions asks you about the effect of the risk mechanisms.

<table>
<thead>
<tr>
<th>To what extent do you agree with the following statements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Formal mechanisms (e.g. risk management framework, formal meetings) help me to:

<table>
<thead>
<tr>
<th>(i) understand executives’ thoughts and attitudes toward risk management.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ii) understand my colleagues’ thoughts and attitudes toward risk management.</td>
</tr>
<tr>
<td>(iii) manage risks in decision making.</td>
</tr>
</tbody>
</table>

b. Informal mechanisms (e.g. informal risk meetings, learning from role models) help me to:

| (i) understand executives’ thoughts and attitudes toward risk management. |
| (ii) understand my colleagues’ thoughts and attitudes toward risk management |
| (iii) manage risks in decision making. |

| Formal mechanisms in my organisation enhance my belief that risk management is useful. |

| Formal mechanisms are more important in risk management than informal mechanisms. |

| Informal mechanisms in my organisation enhance my belief that risk management is useful. |

| Informal mechanisms are more important in risk management than formal mechanisms. |

| I think both formal and informal mechanisms are equally important in risk management. |
Part IV. Effect of Risk Cultural Environments

5. There are four different cultural environments around risk management:

*An collaborative environment* focuses on participation and teamwork in undertaking risk management.

*An innovative environment* encourages organisational members to pursue new ways to do things.

*An competitive environment* values performance and outcomes of risk management.

*An hierarchical environment* places greater importance on conformance, rules, and regulations.

<table>
<thead>
<tr>
<th>To what extent do you agree with the following statements?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. A collaborative environment helps organisational members to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) understand the <em>executives'</em> thoughts and attitudes toward risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) understand my <em>colleagues'</em> thoughts and attitudes toward risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) use risk management for making decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) enhance their <em>belief</em> that risk management is <em>useful</em>.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. A innovative environment helps organisational members to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) understand the <em>executives'</em> thoughts and attitudes toward risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) understand my <em>colleagues'</em> thoughts and attitudes toward risk management.</td>
<td></td>
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<td></td>
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<tr>
<td>(iii) use risk management for making decisions.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) enhance their <em>belief</em> that risk management is <em>useful</em>.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. A competitive environment helps organisational members to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) understand the <em>executives'</em> thoughts and attitudes toward risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) understand my <em>colleagues'</em> thoughts and attitudes toward risk management.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) use risk management for making decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) enhance their <em>belief</em> that risk management is <em>useful</em>.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
To what extent do you agree with the following statements?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

d. A hierarchical environment helps organisational members to:

| (i) understand the **executives’** thoughts and attitudes toward risk management | □ □ □ □ □ |
| (ii) understand my **colleagues’** thoughts and attitudes toward risk management | □ □ □ □ □ |
| (iii) **use** risk management for making decisions. | □ □ □ □ □ |
| (iv) **enhance** their **belief** that risk management is **useful**. | □ □ □ □ □ |
Part V. Risk Cultural Environments

6. The following questions are related to your views on the current and preferred risk management practices in your organisation. Please distribute 10 points among the four options (A, B, C, D) in each section, depending on the extent to which each option reflects the current and preferred practices of your organisation. Give a higher number of points to the option that better reflects the practices of your organisation. For example, if you think option A better reflects your organisation’s current practices than option C and D, and option B hardly reflects your organisation’s current practices, you might give 4 points to A, 3.5 points each to C and D, and 0 points to B. Please ensure that the total (A + B + C + D) equals 10 for each section.

<table>
<thead>
<tr>
<th>Example:</th>
<th>Current Practices</th>
<th>Preferred Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

SECTION 1 – Characteristics of Risk Management

In my organisation, we have:

A  participative risk management practices.
B  innovative risk management practices.
C  result-oriented risk management practices.
D  formal rule-oriented risk management practices.

<table>
<thead>
<tr>
<th></th>
<th>Current Practices</th>
<th>Preferred Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

SECTION 2 – Risk Management Leadership

Leadership in risk management in my organisation is generally considered to exemplify:

A  guiding.
B  innovation.
### SECTION 3 – Management Style

Risk management style in my organisation is characterised by:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>teamwork.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>risk taking.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>hard-driving competitiveness and high demands.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>conformity to mandatory requirements.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** 10 10

### SECTION 4 – Risk Management Approach that holds organisational members together to undertake risk management

In my organisation, members are held together to undertake risk management through:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>mutual trust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>commitment to innovation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>commitment to goal accomplishment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>formal rules and policies.</td>
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</tbody>
</table>

**TOTAL** 10 10

### SECTION 5 – Risk Management Strategic Emphasis

Risk management in my organisation emphasises:

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>organisational members’ skills and knowledge in managing risks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>prospecting for opportunities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>meeting stretch targets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>stability in managing risks.</td>
<td></td>
<td></td>
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</tbody>
</table>

**TOTAL** 10 10

### SECTION 6 – Criteria of Risk Management Success

Risk management is considered successful when risk management results in:

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>employee commitment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>new services or processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>improved performance against targets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>process efficiency.</td>
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</tbody>
</table>

**TOTAL** 10 10
Part VI. Comments

7. Do you have any comments regarding risk culture and risk management practices in your organisation?
Section B

1. Which of the following best describes the risk cultural environment in your organisation? Please tick one.
   - [ ] An environment that focuses on participation and teamwork in undertaking risk management.
   - [ ] An environment that encourages organisational members to pursue new ways to do things.
   - [ ] An environment that values performance and outcomes of risk management.
   - [ ] An environment that places greater importance on conformance, rules, and regulations.

2. Which of the following best describes your role in the organisation?
   - [ ] I design the risk management framework and/or provide risk management advice/support in the organisation.
   - [ ] I make strategic decisions for the organisation and/or approve the risk management framework in the Organisation.
   - [ ] I undertake daily operations for the organisation.

3. How many years have you been involved in risk management?
   _____ year(s) _____ month(s)

4. Which area are you working in?
   - [ ] Project and Program Delivery
   - [ ] Intelligence or Security
   - [ ] Governance (e.g. Policy, Risk Management office, etc)
   - [ ] Corporate Support (ICT)
   - [ ] Corporate Support (Finance, HR, Legal, etc)
   - [x] Other - please specify____________________

5. How long have you been working in the area that you indicated in (3) above?
   _____ year(s) _____ month(s)

6. How many years have you been working in the public sector?
   _____ year(s) _____ month(s)

7. Do you have any private sector experience?
   - [ ] No.
   - [x] Yes. Please indicate how many years: _____ year(s) _____ month(s)

   Thank you very much for your participation.
Appendix 6. Case study protocol adapted from Yin (2009, p. 81)

<table>
<thead>
<tr>
<th>A. Introduction to the case studies and purpose of protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Case study background and research topic</td>
</tr>
<tr>
<td>Risk management has attracted increasing attention in the Australian public sector. Risk management can be affected by a wide range of factors, one of which is risk culture. Risk culture is an important factor in the development and use of risk management for decision making. This research project explores how risk culture is operationalised to promote the integration of risk management into decision making in the public sector. Specifically, this project examines a key aspect of risk culture, that is, organisational members’ beliefs and attitudes towards risk management, and how this aspect influences the use of risk management in decision making.</td>
</tr>
<tr>
<td>2. Propositions</td>
</tr>
<tr>
<td>The increasing focus on risk culture arises as a result of the criticisms centred on the current adverse risk culture in the public sector. Risk management practices in public sector organisations have been criticised for its defensive nature and blame-avoidance usage without the consideration of performance and service delivery aspects. Specifically, in the Australian context, a culture of risk aversion in the public sector has been blamed as the source of impediments to efficiency, performance and innovation. Accordingly, public sector regulators have called for the development of a culture of risk management that enables strategic decision making and accountability. Despite the emphasis on risk culture, there is little understanding as to what drives the development of a risk culture that enhances the use of risk management in decision making in public sector organisations.</td>
</tr>
<tr>
<td>The purpose of this thesis is, therefore, to examine how risk culture explains the use of risk management in decision making in the Australian public sector. The study also investigates the effect of two key factors on the relationship between risk culture and the use of risk management: 1) organisational cultural environments; and 2) the use of formal and informal mechanisms by the organisation.</td>
</tr>
<tr>
<td>3. Theoretical framework for the case studies</td>
</tr>
<tr>
<td>Given the limited research in the area of risk culture in the public sector, this proposal draws on the organisational literature. Two groups in each organisation is to be explored: the executive and the operator group. This is to identify whether organisational members have the integrated, differentiated, or fragmented BUAs regarding the usefulness of risk management. The BUAs then examined with the use of risk management for various purposes.</td>
</tr>
</tbody>
</table>
The composition of the four risk cultural environments, a controlling, a collaborative, a goal-oriented, and an innovative environment, is to be surveyed to identify risk cultural environments.

### B. Data Collection Procedures

1. **Names of sites to be visited, including contact persons**

   The target participant group is a sample of a minimum of two Government Agencies. Approximately, 20 agencies will be contacted. The contact details of the agencies can be obtained from publicly available sources (e.g. Government Websites).

   Initially, the invitation letter will be mailed out to the head of the government agencies to obtain their consent for their staff to participate in interviews and surveys. Due to a lack of contact details on individual members available on the website of the government agencies, the head of the agencies will be requested to nominate two senior executives and eight staff who are involved in the risk management process including risk officers, for participating in the interviews. The nominated staff will then be invited directly by the researcher via email. The head of the agencies or the delegates will also be requested to assist with the distribution of the questionnaire to individual members.

2. **Data collection plan**

   For interviews, the researcher will accommodate participants' availability in the scheduling of interviews. Interview participants will be provided with an invitation letter and an information sheet. Initially, individuals will be requested to fill out a consent form if they are willing to participate in interviews. The information that participants can withdraw from interviews at any time will be clearly communicated through the information sheet and participants will also be reminded of this at the start of the interview. Tape recording will only be used if consent is obtained.

   Questionnaires will be requested to be distributed by the head of the agency or delegates so that the survey is endorsed by the executives in the agency. Participants will be provided with an invitation letter, an information sheet, a reply-paid, self-addressed envelope, and a questionnaire. Participants will be deemed to provide their consent by completing and returning the questionnaires. The information that participation in the survey is voluntary and participants can withdraw from surveys will be clearly communicated through the information sheet. However, once the questionnaire is submitted, it will not be possible to withdraw their responses because the researcher will not be able to identify individuals.

3. **Expected preparation prior to site visits**

   Document review for each organisation is to be undertaken prior to visiting research sites. This is to understand the current risk management practices and the aspirational values of the organisation.

### C. Outline of case study report – categories of the descriptive table

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Overview</td>
<td>A brief introduction to the risk cultural environments surveyed.</td>
</tr>
<tr>
<td>B. Data Collection Procedures</td>
<td>Procedures for selecting and contacting participating agencies.</td>
</tr>
<tr>
<td>C. Outline of case study report</td>
<td>Categories for describing the data collected.</td>
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<tr>
<td>1. BUAs</td>
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<tr>
<td>a. Integrated BUAs</td>
<td></td>
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<tr>
<td>b. Differentiated BUAs</td>
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<tr>
<td>c. Fragmented BUAs</td>
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<tr>
<td>2. Use of risk management</td>
<td></td>
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<tr>
<td>3. Risk cultural environments</td>
<td></td>
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<tr>
<td>a. A controlling risk cultural environment</td>
<td></td>
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<tr>
<td>b. A goal-oriented risk cultural environment</td>
<td></td>
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<tr>
<td>c. A collaborative risk cultural environment</td>
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<tr>
<td>d. An innovative risk cultural environment</td>
<td></td>
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<tr>
<td>4. Risk management mechanisms</td>
<td></td>
</tr>
<tr>
<td>a. Formal risk mechanisms</td>
<td></td>
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<tr>
<td>b. Informal risk mechanisms</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7. Ethics information sheets and consent form

Participant Information Sheet (Questionnaire Survey)

Researcher:

This research is undertaken by Yoon Jin Park as part of her PhD studies at the Research School of Accounting, College of Business and Economics, The Australian National University.

Project Title:

Risk Culture and the Use of Risk Management in Australian Public Sector

General Outline of the Project:

Description and Methodology: The study seeks to explore how risk culture influences the use of risk management for decision making in the Australian public sector. Governments need to have sound risk management practices to manage accountability, performance and public expectations. To this end, increasing attention has been directed to the importance of risk culture in developing and using risk management in various decision-making activities in the public sector. The study therefore examines how risk culture is developed in public sector organisations and what factors affect risk culture and the use of risk management.

Participants: You are invited to take part in this study. Your views are valuable to provide insight into current risk management practices, the factors affecting public sector risk management and how risk culture can better facilitate decision making. The participants include senior executives, risk professionals and staff involved in risk management processes and activities in Australian government organisations.

Use of Data and Feedback: The results of this study will be reported in a PhD thesis and may be published in academic journals or books. In addition, a summary of the results of this research will be provided to the organisations participating in this research.

Participant Involvement:

Voluntary Participation & Withdrawal: Participation is voluntary, and there will be no adverse consequences if you decide not to participate. You may withdraw from participation in the project prior to the return of the questionnaire. Once the questionnaire is submitted, it will not be possible to withdraw participants’ responses because the researcher will not be able to identify individuals.

What does participation in the research request of you? Participants will be invited to take part in completing the questionnaire survey. The process will involve completing responses to the questions provided, and returning the completed questionnaire indicates a participant’s consent to participate in the survey.

Location and Duration: The questionnaire can be completed in any places and it should take approximately 20 minutes to complete.

Risks: No risk is perceived by participating in this research project. Data will be used in aggregated forms and your identity will not be revealed in the thesis or subsequent publications.
**Benefits:** It is expected that the research can contribute to the existing literature and risk management practices in the public sector so as to better understand and manage risks for enhancing accountability, performance and public expectations.

**Confidentiality:**

Given that the focus of this study is on organisational risk culture, the unit of analysis is at the organisation level. As such, there is a need to include an organisation identifier in the questionnaire. However, the organisations will only be identifiable to the researcher and the supervisory panel, and individual respondents will remain anonymous. Also, all the data will be presented in a summarised form in the PhD thesis and other research outputs. Only the researcher and supervisory panel members will have access to the original data. Confidentiality will be protected as far as the law allows. The researcher does not intend to seek any information which is particularly sensitive or confidential. However, it is important that you do not provide information which is of confidential status, or which is sensitive or defamatory.

**Data Storage:**

Where: All information obtained in the questionnaires will be kept confidential as far as the law allows. Paper-based materials will be stored in a locked file drawer in a locked office at the ANU. Electronic data will be kept in a password-protected computer accessible only by the researcher and the supervisory panel.

How Long: In accordance with the ANU’s Code of research conduct, the data will be stored for five years after the publication of the results.

Destruction of Data: After five years from the date of publication of the results, the data will be destroyed.

**Queries and Concerns:**

If you have any queries on this project or would like to request further information, the researcher can be contacted via the phone or email.

Researcher: Ms Yoon-Jin Park  
Phone: 02 6125 5014  
Email: Yoonjin.Park@anu.edu.au

Supervisor: Associate Professor Janet Lee  
Phone: 02 6125 4336  
Email: Janet.Lee@anu.edu.au

**Ethics Committee Clearance:**

The ethical aspects of this research have been approved by the ANU Human Research Ethics Committee. If you have any concerns or complaints about how this research has been conducted, please contact:

Ethics Manager  
The ANU Human Research Ethics Committee  
The Australian National University  
Telephone: +61 2 6125 3427  
Email: Human.Ethics.Officer@anu.edu.au
Participant Information Sheet (Interview)

**Researcher:**

This research is undertaken by Yoon Jin Park as part of her PhD studies at the Research School of Accounting, College of Business and Economics, The Australian National University.

**Project Title:**

Risk Culture and the Use of Risk Management in Australian Public Sector

**General Outline of the Project:**

**Description and Methodology:** The study seeks to explore how risk culture influences the use of risk management for decision making in the Australian public sector. Governments need to have sound risk management practices to manage accountability, performance and public expectations. To this end, increasing attention has been directed to the importance of risk culture in developing and using risk management in various decision-making activities in the public sector. The study therefore examines how risk culture is developed in public sector organisations and what factors affect risk culture and the use of risk management.

**Participants:** You are invited to take part in this study. Your views are valuable to provide insight into current risk management practices, the factors affecting public sector risk management and how risk culture can better facilitate decision making. The participants include senior executives, risk professionals and staff involved in risk management processes and activities in Australian government organisations.

**Use of Data and Feedback:** The results of this study will be reported in a PhD thesis and may be published in academic journals or books. In addition, a summary of the results of this research will be provided to the organisations participating in this research.

**Participant Involvement:**

**Voluntary Participation & Withdrawal:** Participation is voluntary, and there will be no adverse consequences if you decide not to participate. You may withdraw from participation in the project at any time, and you do not need to provide any reason to the researcher. If you decide to withdraw from the project, the researcher will not use any of the information you have provided.

**What does participation in the research request of you?** Participants will be invited to take part in an individual interview. The interview process will involve signing the Interview Consent Form and answering questions about risk culture and use of risk management in an organisation. With your permission, the interview may also be audio-taped.

**Location and Duration:** The interviews will be undertaken at the room designated by your organisation.

**Risks:** By participating in this research project, there may be risks that you might be identified by what you say. To mitigate this risk, data will be used in aggregated forms unless direct quotes are used. In any case, your identity will not be revealed in the thesis or subsequent publications.
**Benefits:** It is expected that the research can contribute to the existing literature and risk management practices in the public sector so as to better understand and manage risks for enhancing accountability, performance and public expectations.

**Confidentiality:**
You and your organisation will not be identified in the results, unless you have explicitly consented to be identified. All the data will be presented in a summarised form in the PhD thesis and other research outputs. Only the researcher and supervisory panel members will have access to the original data. Confidentiality will be protected as far as the law allows. The researcher does not intend to seek any information which is particularly sensitive or confidential. However, it is important that you do not provide information which is of confidential status, or which is sensitive or defamatory.

**Data Storage:**
**Where:** All information obtained in interviews will be kept confidential as far as the law allows. Paper-based materials will be stored in a locked file drawer in a locked office at the ANU. Electronic data will be kept in a password-protected computer accessible only by the researcher and the supervisory panel.
**How Long:** In accordance with the ANU’s Code of research conduct, the data will be stored for five years after the publication of the results.

**Destruction of Data:** After five years from the date of publication of the results, the data will be destroyed.

**Queries and Concerns:**
If you have any queries on this project or would like to request further information, the researcher can be contacted via the phone or email.

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Supervisor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Yoon-Jin Park</td>
<td>Associate Professor Janet Lee</td>
</tr>
<tr>
<td>Phone: 02 6125 5014</td>
<td>Phone: 02 6125 4336</td>
</tr>
<tr>
<td>Email: <a href="mailto:Yoonjin.Park@anu.edu.au">Yoonjin.Park@anu.edu.au</a></td>
<td>Email: <a href="mailto:Janet.Lee@anu.edu.au">Janet.Lee@anu.edu.au</a></td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>The ANU Human Research Ethics Committee</td>
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<tr>
<td>The Australian National University</td>
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<tr>
<td>Telephone: +61 2 6125 3427</td>
</tr>
<tr>
<td>Email: <a href="mailto:Human.Ethics.Officer@anu.edu.au">Human.Ethics.Officer@anu.edu.au</a></td>
</tr>
</tbody>
</table>
WRITTEN CONSENT for Participants

Risk Culture and the Use of Risk Management in Australian Public Sector

I have read and understood the Information Sheet you have given me about the research project, and I have had any questions and concerns about the project (listed here)

__________________________________________________________________________

addressed to my satisfaction. I agree to participate in the project.  YES ☐ NO ☐

I agree to this interview being audio-recorded  YES ☐ NO ☐

Signature:..................................................................................
Appendix 8. Organisation B members’ BUAs and the purpose for which risk management is used

This section discusses members’ BUAs regarding the usefulness of risk management in Organisation B.

The analysis of respondents’ BUAs in Table A8.1 revealed that participants responded that risk management is moderately useful in performing their jobs. They considered risk management was most useful in strategic or operational decision-making. Other purposes that risk management was considered moderately useful included policy-focused activities or providing advice. Compliance-orientation or assessing downside risks were considered less useful by members.

Table A8.1 Organisational members' BUA about the usefulness of risk management

<table>
<thead>
<tr>
<th>BUA</th>
<th>Total</th>
<th>Executive group</th>
<th>Operator group</th>
<th>Executive group vs. Operator group</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk management is useful when members:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Mean (SD)</td>
<td>Median</td>
<td></td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>3.52 (0.83)</td>
<td>3.63</td>
<td>4.00 (0.54)</td>
<td>3.90</td>
<td>3.31 (0.86)</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or providing advice</td>
<td>3.28 (1.00)</td>
<td>3.25</td>
<td>3.50 (0.57)</td>
<td>3.38</td>
<td>3.18 (1.15)</td>
</tr>
<tr>
<td>Focus on compliance</td>
<td>3.26 (1.12)</td>
<td>3.33</td>
<td>3.94 (0.44)</td>
<td>4.00</td>
<td>2.96 (1.21)</td>
</tr>
<tr>
<td>Assess downsides</td>
<td>3.23 (1.02)</td>
<td>3.50</td>
<td>3.25 (1.17)</td>
<td>4.00</td>
<td>3.21 (0.99)</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)

**p < 0.05

Usefulness scale: 1 - Not at all; 2 - Slightly; 3 - Moderately; 4 - Very; 5 - Extremely
Some participants from the executive group and operator group frequently commented risk management in the context of compliance purposes including maintaining accountability and sound governance and conformance to internal or external requirements.

[C]ertainly it is at the forefront of my mind and everything I do. And particularly ... it covers a lot of spectrums from cash to accountability and transparency of the decisions in the processes. Certainly, there is a strong emphasis across those five teams in what I always do around risk management (Organisation B, Operator group 4)

[W]e administer the legislations. There are a whole bunch of rules that are embedded in the processes we do to make sure we comply with the law. (Organisation B, Executive group 1)

Differences in the extent of the usefulness of risk management was found between the executive and the operator group for the purpose of strategic and operational decisions, indicating the differentiated BUAs⁹. Respondents from the executive group believed that risk management was very useful for strategic or operational decisions while the operator group believed that risk management was only moderately useful for this purpose. No difference in the BUAs between the executive and the operator group was found in risk management for development and implementation of policy, compliance and assessing downsides, indicating the existence of the integrated BUAs in that both executive and operator groups believed that risk management was only moderately useful for these purposes.

Table A8.1 also showed that the executive group rated the usefulness of risk management for compliance purposes at a similar level as that for strategic or operational decisions. An interviewee from the executive group also considered that risk management was useful not only

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⁹ For the purpose of this thesis, integrated BUAs and differentiated BUAs is interpreted as the extent of alignment in BUAs between the executive and operator groups, and is indicated by comparing the difference in the mean scores for BUAs between the two groups using the questionnaire data. A significant difference in the mean scores between the two groups indicates the existence of differentiated BUAs. No significant difference represents integrated BUAs. Further evidence of the existence of differentiated or integrated BUAs is obtained from the interview data. Fragmented BUAs is interpreted as the extent of alignment within each group and is analysed using interview data.
for compliance purposes, but also for their strategic or project decision-making because it provided a chance to holistically contemplate what might or might not work, prompting members at all levels to think about alternative options, as an interviewee commented that:

*Where it is a question even for staff, leadership happens at all levels. Risk management actually should happen at all levels. You can go into trouble where people just go “It is just fine. I am going to tick the box.” … “What about this or what about that?” and that is the risk management side of a thing. It is not OK just to tick the box.*

(Organisation B, Executive group 1)

Another interviewee from the executive group believed that the organisation’s members have used risk management for decision-making because they perceived the benefits of it, not because they must tick the box.

*I think we are a mature-enough organisation to understand the benefits of risk management. … it is not necessarily [that] it [risk management] is a rule, it [risk management] is about a choice…*  

(Organisation B, Executive group 2)

Interviewees from the operator group mostly agreed that risk management has been useful in aiding their decision-making. Some operators considered risk management as ‘vital’, when running day-to-day operations such as assessing and approving applications or providing financial or technical services to internal stakeholders.

*It [Risk management] is vital to what they [team members] do. We actually are proud of ourselves on being ourselves risk-managed security practice rather than a compliance-based security practice. It is, everybody is on board. We talk about it [risk management] all the time.*

(Organisation B, Operator group 3)

To some participants in Organisation B, the usefulness of risk management was not considered on their daily tasks as risk management was embedded in operational processes. As risk management was not visible to members in their operational processes, certain members have not thought about the usefulness of risk management for decision-making though they
undertook risk management components within the processes. In response to the question on
the usefulness of risk management in performing operations, an interviewee commented that:

I am going to be totally honest with you and say “No, I don’t really think they think about it [the usefulness of risk management when doing their job].” (Organisation B, Operator group 2)

In response to whether other function or team members had the BUAs that risk management
was useful in their day-to-day decision-making, some members from the operator group
responded an opinion that they observed certain part of the organisation’s operator group
recognised risk management as a tick-the-box exercise, and that risk management was a
necessary evil in everyday decision-making. Therefore, risk management was not considered
as useful for day-to-day decision-making by some operators.

Organisational members tend to think that risk management is seen as
a necessary evil, one of those things you have to follow as part of the
processes. ... risk management is something that needs to be done. ... [It is a] tick and flick exercise to a degree. (Organisation B, Operator group 1)

I would say sometimes it has paid a lip-service… (Organisation B, Operator group 4)

Given the diverse views regarding the usefulness of risk management for decision-making, it
highlighted the existence of the fragmented BUAs within the operator group. Though there was
no clear evidence of the differentiated BUAs in the area of the development and implementation
of policy or providing advice, in-depth interviews with members shed light on examples of the
fragmented BUAs in this area. While some interviewees highlighted that risk management had
been vital to provide advice to stakeholders, other participants argued that the operator group
sometimes recognised risk management as bureaucratic rather than being useful in this area.

Because it [risk management] allows me to quantify the advice that I
am giving to people, [it is vital]. (Organisation B, Operator group 3)
Sometimes it can be a little bit problematic [to members]. Because you really want to have the flexibility to move in the organisation to get things done. And if you are always thinking of the risk environment, you probably had not got it right. You know, it is probably too...it can become...like a lot of things in corporate [policy areas], it can become too bureaucratic. (Organisation B, Executive group 2)

Table A8.2 displays the extent of the use of risk management by Organisation B members. Organisation B members adopted risk management only to a moderate extent. The results revealed that members primarily used risk management for compliance purposes. However, there was a less extent of use of risk management in the area of strategic or operational decision-making, assessing downsides, and for development and implementation of policies or providing advice.
Table A8.2 Organisational members’ use of risk management

<table>
<thead>
<tr>
<th>Use</th>
<th>Total Mean (SD)</th>
<th>Median</th>
<th>Executive group Mean (SD)</th>
<th>Median</th>
<th>Operator group Mean (SD)</th>
<th>Median</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on compliance</td>
<td>3.36 (1.05)</td>
<td>3.17</td>
<td>3.83 (0.72)</td>
<td>3.67</td>
<td>3.15 (1.13)</td>
<td>3.00</td>
<td>0.134</td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>2.95 (0.97)</td>
<td>3.00</td>
<td>3.18 (0.94)</td>
<td>3.45</td>
<td>2.84 (1.00)</td>
<td>2.70</td>
<td>0.320</td>
</tr>
<tr>
<td>Assess downsides</td>
<td>2.93 (1.08)</td>
<td>2.75</td>
<td>2.75 (1.13)</td>
<td>3.00</td>
<td>3.00 (1.09)</td>
<td>2.75</td>
<td>0.641</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or providing advice</td>
<td>2.80 (0.94)</td>
<td>2.75</td>
<td>3.08 (0.63)</td>
<td>3.00</td>
<td>2.68 (1.04)</td>
<td>2.63</td>
<td>0.263</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)
Frequency of use scale: 1 - Never; 2 - Occasionally; 3 - Sometimes; 4 - Frequently; 5 - All the time

In Organisation B, compliance-oriented risk management included identifying and assessing risks associated with rules and regulations. For instance, interview findings indicated that an audit and quality management approach has been a common risk treatment to monitor compliance risks in IT or agency-specific operational areas. In addition, many financial processes in the organisation were implemented to manage financial compliance risks under legislative requirements such as the *Public Governance, Performance and Accountability Act* and the Commonwealth Procurement Rules. In this case, risk management was used to capture and document critical decisions in order to enhance accountability and transparency of the team’s processes.

*P*articularly around the procurement function. *It is around the transparency of the decision. So a lot of the time, it is [about] being able to explain it to an unsuccessful vendor as well as the business unit within*
the organisation why this decision has been made. Certainly, it is largely rules-based around the legislative guidance from the government. Then [W]e move into the financial reporting and the accounting operation space and it is probably even more so around accounting decisions why judgements being made on these treatments as well as the legislative base of the authority and decision from financial delegations to the PGPA Act. And as well where certainly around the decisions of financial system is around those systemic control approaches to reduce risks. (Organisation B, Operator group 4)

Risk management for strategic decision-making involved thinking about risks of developing and implementing certain decisions and their long-term consequences. In terms of the operational decision-making, participants commented that the organisation used rules and procedures to embed risk management elements, such as making members to consider areas of risks and to find controls, into some organisational operational processes.

[I]dentifying areas of vulnerabilities in systems, the way we handle the data, the way we store information and being able to identify and mitigate controls whether that would be procedural, technical, and trying to manage those risks. (Organisation B, Operator group 3)

Risk management in assessing downsides was also found. For example, in ensuring security, vulnerabilities were always searched for to prevent any undesirable events from crystallising.

[R]isk management means identifying areas of vulnerabilities in systems, the way we handle the data, the way we store information and being able to identifying and mitigating controls whether that would be procedural, technical, trying to manage those risks. (Organisation B, Operator group 3)

An operator commented that risk management has also been used to provide advice to the executives on matter of protecting staff, information and resources. On the other hand, decision-making activities of the executive group included risk management in workforce planning or in resource prioritisation decisions.

That [planning] is about the challenges, which is essentially about the risks. How do we get this [work] done, how would we not get this done, and some of the areas certainly have gone, the policy areas have gone to a lot of trouble in terms of “Right, if we don’t have the resources and
we have to do other stuff, what do we stop doing?” That is a very open conversation and with an entire team so that they collectively understand what other risk they are facing, what they might do to re-prioritise. (Organisation B, Executive group 2)

In relation to the policy-related decisions and assessing risk, the executive group indicated that managing the positive side of risks existed to a certain extent in the organisation. These groups provided examples of how members used risk management to identify opportunities or develop and implement strategies, including risk management in investing in appropriate projects, implementing a new operational process and discussing an international policy direction. However, the use of risk management for identifying opportunities did not seem to be a widely spread phenomenon as participants from the operator group infrequently comment on this purpose of risk management.
Appendix 9. Organisation B’s risk cultural environments

According to the questionnaire responses from Organisation B’s members, the risk cultural environments exhibited a greater extent of a controlling risk cultural environment, with a lesser extent of a goal-oriented, a collaborative, and an innovative environment. Figure A9.1 below displays the current and preferred composition of risk cultural environments as perceived by the questionnaire survey participants.

Figure A9.1 Organisation B’s composition of the risk cultural environments

The interview data revealed that transactional roles played by the organisation and the need for efficiency or legislative requirements led to a more controlling risk cultural environment in certain areas.
Participants had different views regarding the extent of a goal-oriented environment. Half of the participants expressed the view that the organisation did not display a risk cultural environment that emphasises its goals.

_No, not very often. The behaviour [non goal-oriented risk culture] is similar at all levels._ (Organisation B, Operator group 1)

Other participants, however, argued that certain corporate, operational and project management functions and teams over-emphasised the achievements of short-term goals. One interviewee raised a concern that some members delivered the objectives ‘at the expense of everything else’ without considering a broad spectrum of risks.

[C]ertainly around project management, their primary risk is about delivery [of the goals] at the expense of everything else. (Organisation B, Operator group 4)

An interviewee also described the composition of the current risk cultural environment in the organisation as a combination of a goal-oriented and controlling environment. The interviewee added that the composition of certain cultural environments varied across different functional areas and teams.

[I]nterestingly I would think that because we have two sides of the business and I think my goal-oriented focus suits my side of the business and the rule-oriented focus sits the other side of the business. (Organisation B, Executive group 1)

In regard to a collaborative risk cultural environment in the organisation, some operator groups argued that a collaborative risk cultural environment was not extended across different levels and functions in the organisation. It was noted that sharing risk information and collaboration tended to occur primarily at the top. Some participants from the operator group did not consider their risk management environments as supportive or guiding. A comment from an interviewee summed up that Organisation B did not have a similar level of a collaborative risk cultural environment as other public-sector organisations.
Certainly the level of consultations I would be used to elsewhere in the public service probably isn’t here. (Organisation B, Operator group 4)

Participants responded that Organisation B’s innovative risk cultural environment was relatively weak as they perceived that there was no risk tolerance in the domain of delivering services to external clients, which was the core operations of Organisation B.

It is nothing that will affect us delivering services to our clients. They have no risk tolerance for that being touched [no risk tolerance for any changes to delivering services to clients], which is unfortunate. Because it means that we are not being innovative in our solutions to our clients. (Organisation B, Operator group 3)

Overall, the executive group perceived that the organisation had an extremely strong controlling risk cultural environment. However, they thought that a greater collaborative environment with a balance of the other three risk cultural environments was more desirable (see Figure A9.2). Similar to the executive group, operators viewed Organisation B had a stronger controlling risk cultural environment, followed by a goal-oriented environment. Contrary to the executive group, their preferred composition was a balance among the four different risk cultural environments (see Figure A9.3).
Figure A9.2 Organisation B’s composition of the risk cultural environments perceived by the executive group

Figure A9.3 Organisation B’s composition of the risk cultural environments perceived by the Operator group
Appendix 10. Organisation B’s risk mechanisms

This section discusses members’ perception on the helpfulness of the risk management mechanisms and their actual use. As discussed in Chapter 2, the risk management literature highlights that many organisations adopt well-known risk mechanisms, such as risk registers and risk maps. These mechanisms are viewed as a tool to facilitate or discourage interactions among members. (Arena et al., 2017; Themsen and Skæbæk 2018). Consistent with these studies, Organisation B has established a set of formal and informal risk mechanisms such as the overarching risk management framework, online risk management training, a formal risk champion network, business plans incorporating risk management components, divisional risk registers, formal risk reporting and meetings, and informal risk discussions.

Table A10.1 shows the questionnaire results for the extent of the helpfulness of risk mechanisms perceived by Organisation B participants. The risk management framework, formal and informal support provided by the risk management function, informal risk management workshop, informal brainstorming sessions about risk management and formal meetings on risk management were considered moderately helpful by members. In particular, the operator groups perceived informal risk management workshop highly helpful.

During the interviews, risk registers were frequently commented by both groups. The executive group perceived it as a helpful monitoring tool for managing risks. The registers completed by different functions were collated and reported to the audit committee of the organisation, so as to ensure that the registers were prepared properly.

_I think the risk registers themselves, particularly the corporate risk register [are more effective], because it is reviewed at the audit committee, the executives want to make sure that they are doing it properly. So there is sort of double check there._ (Organisation B, Executive group 2)
The other helpful mechanisms, which were not included in the questionnaire or interview question but was considered very helpful included risk champions network and external agency’s expertise and advice.

Some organisational members have never understood what [a particular function in Organisation B] is about and its importance. The recommendations by [an external agency] changed their views on the concept of [the function] and acceptable mitigations. (Organisation B, Operator group 1)
Table A10.1 Helpfulness of risk mechanisms

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*Mann-Whitney U test - Exact Sig. (2-tailed)
Table A10.2 displays the extent of the use of risk mechanisms. The extent of the use of risk mechanisms were found to be less than that of their perceived helpfulness. Nevertheless, most participants used mandatory business plans incorporating risk management components and the formal risk management framework to a moderate extent.

Other risk mechanisms were used occasionally only. For example, interviewees commented that many members did not initiate informal risk discussions unless a particular function or team was interested in risk management.

*Discussions are in some areas... [We] do not discuss a lot about risk management. They very rarely come and talk [a type of risk associated with a particular team] risks with us (Organisation B, Operator group 1)*

*We have to force the conversations a lot. So we have to go and sit with the executives and go “What is your risk? If we did this, what would you say?” So it is a lot of forced conversations. (Organisation B, Operator group 3)*

The executive group used risk reporting and formal and informal support provided by the risk management function to a greater extent than the operator group because these risk mechanisms tended to be provided to the top in Organisation B, highlighting a lack of interactions on risk management with the operator group.

*I don’t interact [on risk management] at the operational level. With all the executives, I see the results of that interaction [collated reports]. (Organisation B, Executive group 2)*

This was because the risk management function in Organisation B established and maintained risk management framework while collating risk reporting at the top level. Due to the small size of the risk management function, its roles were oriented around compliance and formal reporting, which Kaplan and Mikes (2016, p. 11) conceptualises as ‘independent overseers’. Such a role is considered as the traditional territory of risk management.
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<th>Significance*</th>
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<tbody>
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<td>3.00</td>
<td>1.00</td>
<td>5.00</td>
<td>3.00 (1.41)</td>
<td>3.00</td>
<td>1.00</td>
<td>5.00</td>
<td>3.00 (0.88)</td>
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<tr>
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<td>5.00</td>
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<td>3.50 (0.84)</td>
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<td>2.46 (0.78)</td>
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<td>3.00</td>
<td>0.026**</td>
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<tr>
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<td>3.00 (0.89)</td>
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<td>4.00</td>
<td>3.33 (0.82)</td>
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<td>4.00</td>
<td>2.13 (0.84)</td>
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<td>0.032**</td>
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<td>3.20 (1.10)</td>
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<td>Intranet communication about risk management</td>
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<td>1.00</td>
<td>4.00</td>
<td>3.00 (0.89)</td>
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<td>2.00</td>
<td>4.00</td>
<td>2.50 (0.68)</td>
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<tr>
<td>Risk appetite and tolerance statements</td>
<td>2.56 (1.20)</td>
<td>2.50</td>
<td>1.00</td>
<td>5.00</td>
<td>3.00 (1.23)</td>
<td>3.00</td>
<td>1.00</td>
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<tr>
<td>Visual presentation of risks (e.g. risk maps or risk matrices)</td>
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<td>3.00</td>
<td>1.00</td>
<td>4.00</td>
<td>3.00 (1.00)</td>
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<td>4.00</td>
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<td>Performance management framework that focuses on risk management</td>
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<td>3.00 (0.71)</td>
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<td>2.00</td>
<td>4.00</td>
<td>2.11 (1.05)</td>
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<td>Brainstorming sessions about risk management</td>
<td>2.38 (0.87)</td>
<td>3.00</td>
<td>1.00</td>
<td>3.00</td>
<td>3.00 (0.00)</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
<td>2.00 (0.93)</td>
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<tr>
<td>Networking with relevant risk management stakeholders</td>
<td>2.18 (0.81)</td>
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<td>1.00</td>
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<td>2.33 (1.03)</td>
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<td>Risk Management Training</td>
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<td>1.00</td>
<td>3.00</td>
<td>2.33 (0.82)</td>
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<td>1.00</td>
<td>3.00</td>
<td>1.83 (0.58)</td>
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<td>Discussion about risk management outside meetings</td>
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<td>1.00</td>
<td>4.00</td>
<td>3.00 (0.63)</td>
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<td>Risk mechanisms</td>
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<td></td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Minimum</td>
<td>Maximum</td>
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<tr>
<td>Meetings on risk management</td>
<td>2.56 (1.03)</td>
<td>2.00</td>
<td>1.00</td>
<td>4.00</td>
<td>2.83 (1.33)</td>
<td>3.00</td>
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<td>Learning from risk management role models</td>
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<td>2.50 (0.84)</td>
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<tr>
<td>Support provided by the risk management function</td>
<td>2.46 (0.97)</td>
<td>2.00</td>
<td>1.00</td>
<td>4.00</td>
<td>3.17 (0.75)</td>
<td>3.00</td>
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<td>4.00</td>
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<tr>
<td>Reporting process about risk management</td>
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<td>3.20 (0.84)</td>
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<tr>
<td>Email communication about risk management</td>
<td>2.38 (1.12)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.33 (1.03)</td>
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<tr>
<td>Brainstorming sessions about risk management</td>
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<td>1.00</td>
<td>4.00</td>
<td>2.50 (1.05)</td>
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<tr>
<td>Intranet communication about risk management</td>
<td>2.25 (0.71)</td>
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<td>1.00</td>
<td>3.00</td>
<td>2.67 (0.58)</td>
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<tr>
<td>Networking with relevant risk management stakeholders</td>
<td>2.14 (0.95)</td>
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<td>1.00</td>
<td>4.00</td>
<td>2.20 (1.10)</td>
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<td>4.00</td>
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<tr>
<td>Risk management workshops</td>
<td>2.00 (1.29)</td>
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<td>1.00</td>
<td>4.00</td>
<td>2.33 (1.16)</td>
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<td>3.00</td>
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</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)
**p < 0.05
Interestingly, several risk mechanisms that were considered helpful were used only occasionally. For example, both formal and informal risk management workshops were considered to be more helpful than their actual use. In fact, workshops were rated as one of the least used mechanisms. This finding was in line with the executive group’s lack of interactions with the Operator group. Some members were clearly aware that the organisation did not have a capacity to engage with more operational members in managing risk through workshop arrangements due to a resource constraint. In Organisation B, the major duties of the risk management function were structured as a support in the areas of governance, compliance and reporting, rather than interacting with Operator groups in risk management practices.

Risk management training was also used least apart from the workshops. As part of the risk management framework review, the executive group was undertaking a review of online risk management training in terms of its relevance and coverage as they considered that updating the training appropriately would be helpful to enhance members’ knowledge as to how to manage risks. However, certain Operator groups considered the contents of the risk management training were not relevant to members’ day-to-day jobs, expressing their doubts towards the effectiveness of online training.

*I am not sure [risk management] training has been effective.*
(Organisation B, Operator group 1)

*No, … I personally have some doubts about the effectiveness of them [risk management training].* (Organisation B, Operator group 2)
Appendix 11. Organisation C members BUAs and the purposes for which risk management is used

Table A11.1 summarises Organisation C members’ BUAs. Overall, members in Organisation C believed that risk management was most useful for assessing downside risk and for compliance-oriented activities. The usefulness of risk management for strategic or operational decision-making was valued moderately by respondents, followed by the level of the usefulness of risk management for development and implementation of policy and providing advice. In particular, the executive group tended to believe that risk management was more useful for strategic or operational decision-making and for development and implementation of policies or providing advice than the operator group.

Table A11.1 Organisational members’ BUAs about the usefulness of risk management

<table>
<thead>
<tr>
<th>Risk management is useful when members:</th>
<th>Total</th>
<th>Executive group</th>
<th>Operator group</th>
<th>Executive group vs. Operator group</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess downsides</td>
<td>3.75 (0.90)</td>
<td>4.00</td>
<td>3.78 (0.92)</td>
<td>4.00</td>
<td>3.75 (0.91)</td>
</tr>
<tr>
<td>Focus on compliance</td>
<td>3.72 (0.93)</td>
<td>4.00</td>
<td>3.75 (1.12)</td>
<td>4.00</td>
<td>3.73 (0.90)</td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>3.58 (0.88)</td>
<td>3.80</td>
<td>3.96 (0.86)</td>
<td>4.00</td>
<td>3.48 (0.88)</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or providing advice</td>
<td>3.46 (0.89)</td>
<td>3.75</td>
<td>3.84 (0.66)</td>
<td>4.00</td>
<td>3.36 (0.94)</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)

**p < 0.05

Usefulness scale: 1 - Not at all; 2 - Slightly; 3 - Moderately; 4 - Very; 5 - Extremely
The questionnaire and interview results revealed that integrated, differentiated and fragmented BUAs on the usefulness of risk management co-existed in Organisation C. According to Table A1.1, risk management for assessing downsides and for compliance does not show a significant difference between the executive and the operator groups. Both groups rated the usefulness at a similar level, which suggested the existence of the integrated BUAs.

The value and imperative of risk management for compliance was acknowledged by both the executive and operator groups.

[M]y function has done the compliance testing in the organisation we have to report to the government on our compliance performance. ... we identified the changes to the amount of work we are doing by identifying the risks and what triggers we have to look at, because we have to look at signals for us to respond and do more work. (Organisation C, Executive group 3)

I would say that probably be equally applied to the strategic, corporate side of the house, so the risks, you know we come up with risk registers and things ... because we are required to by governments to report how we are identifying and managing risks in the organisation. (Organisation C, Operator 2)

Members considered that risk management for complying with the external or internal requirements and monitoring the level of compliance was successfully incorporated into several organisational processes, such as WHS, finance, security, and project management, which enabled members to understand the benefits of risk management.

In work health safety, I see it [members’ BUAs that risk management is useful in this area] much more than I used to be in [a risk management function] because equipment that people are using and stuff and they go “OK, it isn’t working for us. So we will do a risk assessment to pick up why it is not working for us and to show management where the problems lie. Or we want to buy a new piece of equipment because of safety issues we have seen. So we will do the risk assessment to show the positives in having that piece of equipment. So yes, I see it a lot more in the safety space. (Organisation C, Executive group 6)

In particular, Organisation C was governed by numerous regulations as the impact of the organisational core operations could generate substantial adverse consequences. Hence,
members possessed BUAs that compliance-oriented risk management was necessary in many situations to protect safety of the stakeholders involved.

Yes, it [risk management] is [useful]. So when you are doing the [operational duty that needs to ensure safety] stuff, definitely you need to do it. (Organisation C, Operator group 5)

In Organisation C, assessing downside risks such as preventing undesirable events was considered most useful by the operator group because undertaking some operational activities could result in loss of life or injuries. Some interviewees, therefore, commented that members were strongly encouraged to focus on managing downside risks.

Unfortunately because of the nature of the work, they are more likely to get negative stories about risk management [downside risk management stories]. (Organisation C, Executive group 4)

However, the interview findings further revealed the fragmented BUAs in risk management for assessing downsides across different functions or teams. While members in some areas commented that it was useful to manage downside risks, others did not agree this view by ignoring the identification of risks. This seem to have been caused by some members having risk averse attitudes versus other members possessing risk blindness attitudes. Based on the concept put forward by Boholm & Corvellec (2016), risk blindness stems from refusing to accept that there is risk, while risk aversion arises from refusing to manage or take risk that is identified. In Organisation C, risk aversion was associated with members’ thoughts that ‘failure can mean harm’, and many members were guided under the espoused value that there should be no failure. This assumption had driven members to take a cautious approach and pursue a traditional way to complete their tasks. A participant, however, argued that there was also the thought of ‘blind to risk’ where some members behaved like there was no risk in any situations. As these members fully focused on achieving their goals, they sometimes took actions without considering risks.
[W]here [people say] there is no risks, we have looked there is no risks, which is not true. ... where people are just blind to risks. (Organisation C, Operator group 6)

According to the results from the questionnaire responses, the executive group considered risk management for strategic or operational decision-making and for development and implementation of policy or providing advice more useful than the operator group, highlighting the differentiated BUAs between the two groups.

[T]here is certainly the senior executive level has a very positive engagement with that respect. Less so specific to junior levels in my portfolio. (Organisation C, Executive group 3)

Most our senior executives I think understand risk...at a really sort of micro level at a very practical level, in the middle [between the executive and Operator groups], there is a disconnect and that has been my impression for many years. (Organisation C, Operator group 9)

Analysis of the interview data suggested that the fragmented BUAs also existed in the area of risk management for strategic or operational decision-making. The operator group across different functions had mixed views with some believed that risk management was useful in making operational decisions in their current roles.

I would say perhaps only 50% of organisational members may think it useful. (Organisation C, Operator group 3)

So they do it because they have to do it. I think it is just not my team but other teams I worked in, [there is] a real lack of understanding of the benefit... (Organisation C, Operator group 5)

The fragmented BUAs were described in their comments in that some of Organisation C Operator groups across different teams or functions considered risk management as a process for the sake of completing a mandatory process rather than for operational decision-making purposes. In particular, interviewees were concerned that junior members across different operator groups tended to consider risk management being built into operational processes as a mere paper exercise.
What I do think is that I am concerned that people do it as a paper exercise. And just because it needs to be there. (Organisation C, Executive group 2)

With respect to the purposes for which risk management was used in the organisation, Table A11.2 shows members’ use of risk management for four different purposes. Risk management was mostly used for compliance purpose. Members also used risk management moderately to assess downsides, and for strategic or operational decision-making.

Table A11.2 Organisational members’ use of risk management

<table>
<thead>
<tr>
<th>Use</th>
<th>Total</th>
<th>Executive group</th>
<th>Operator group</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members use risk management to:</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Mean (SD)</td>
<td>Median</td>
</tr>
<tr>
<td>Focus on compliance</td>
<td>3.63 (1.04)</td>
<td>3.83</td>
<td>3.68 (1.07)</td>
<td>4.00</td>
</tr>
<tr>
<td>Assess downsides</td>
<td>3.42 (0.94)</td>
<td>3.50</td>
<td>3.61 (0.90)</td>
<td>3.50</td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>3.21 (0.93)</td>
<td>3.40</td>
<td>3.52 (0.87)</td>
<td>3.40</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or environmental scanning</td>
<td>3.06 (0.92)</td>
<td>3.00</td>
<td>3.57 (0.75)</td>
<td>3.63</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)

**p < 0.05

Frequency of use scale: 1 - Never; 2 - Occasionally; 3 - Sometimes; 4 - Frequently; 5 - All the time

Compliance-oriented risk management was largely adopted to manage and monitor compliance risks by senior and middle managers in the finance function and the project management function.

*My function will do, has done the compliance testing in the organisation. We have to report to the government on our compliance performance. ... [In monitoring compliance risks] we identified the changes to the amount of work we are doing by identifying the risks and
what triggers we have to look at, because we have to look at signals that we have to look at for us to respond and do more work. (Organisation C, Executive group 3)

In assessing downside risks, some interviewees from the operator group commented that they used risk management for preventing undesirable events. As it was highlighted in espoused beliefs and values on the Organisation C’s corporate documents, members were strongly encouraged to ensure safety of all people involved during operational processes. These espoused beliefs and values were deeply ingrained in Organisation C members’ BUAs, hence making members identify and manage risk along with these beliefs and values.

As an operational organisation, I think the focus of the operational people would be more on their personal safety. The risk to the community, the risk to themselves, and in certain situations, [the risk is whether] they [members] are appropriately trained to deliver their services to broader community. (Organisation C, Operator group 8)

The [one of main operations] we handle, everything we handle is potentially contaminant, potentially biohazard, ... has potential hazard or risk associated with our own practice that we need to mitigate and manage... (Organisation C, Executive group 5)

The activities across those three teams, they are informed by risk and most of those risks are around adverse findings and potential exposure. So some of those come to reputation and reputation is not a risk itself but as a consequence. (Organisation C, Operator group 9)

Interviewees from the operator group also used risk management for strategic or operational decision-making in the fields of operational planning, preparing for external uncertainty and prioritising resources. Planning and the development and implementation of strategies incorporating risk management principles was also used by participants across the organisation.

Assessing what risks are associated with our [core operational] activities and then put in plans in place as to how we deal with it [the particular risk identified in the process]. (Organisation C, Operator group 7)

Are we resourced properly, are we retaining our people, some of our high risks, do we have right tools to do our jobs. ... it is a very important risk and the other one is attracting and retaining the best people because
if we haven’t got the people and the tools, we can’t do what we do. (Organisation C, Executive group 4)

In the fields of strategic or operational decision-making, the executive group used risk management for identifying opportunities more than the operator groups. Some executives had a greater appetite for taking risks while some took a more incremental approach to take risks.

[R]eally do actively engage with risks not just for protecting ourselves against failure or collapse but also taking opportunities to achieve what we can with limited resources we can... (Organisation C, Executive group 3)

[L]ooking at options around technology, looking at options around our workflows, looking at partnering environments how we might be able to utilise our leverage, support capability from other areas, that sort of things. ...in certain areas of our business concerns around our capacity and the impact that our resourcing in those areas might have. And so we undertook our assessment of that. (Organisation C, Executive group 5)
Appendix 12. Organisation C’s risk cultural environment

This section discusses Organisation C’s composition of the risk cultural environments. Organisation C members perceived that the organisation had a very strong controlling risk cultural environment, followed by a goal-oriented, a collaborative and an innovative risk cultural environment (see Figure A12.1). Their perception was consistent with prior literature highlighting the emphasis of the public sector on conformance to rules and outcome (Parker and Bradley, 2000).

Figure A12.1 Organisation C’s composition of the risk cultural environments

Interviewees described that Organisation C was particularly oriented towards a controlling environment, with a number of governance/administrative arrangements, formalised hierarchy
and structured rules. In many cases, participants noted that the conformance-centric cultural environment led members to overwhelmingly consider risk management as part of compliance activities.

\[I\]t is quite prescriptive and a lot of them I would say feel overwhelmed by the amount of the governance that they have to follow...
(Organisation C, Operator group 2)

The organisation is very conservative in its risk management. Risk management is seen as a formal process, rather than a way of thinking. This drives a culture focus on process and tasks, rather than outcomes and innovation. Consequently, we strive to maintain the status quo, rather than adaptive and proactive approach. (Organisation C, Executive group C36)

With regard to the goal-oriented risk cultural environment, most interviewees agreed that the organisation’s members were affected by a goal-oriented environment when managing risks. Risk management helped to change Organisation C’s decision-making processes in that members started to think about their options and their consequences prior to carrying out their operations in order to reduce risk as well as achieving effectiveness in their operations.

\[M\]ost of my experience is on the [operational] side of the house, I guess it is very much focused on achieving outcomes. So if we want to execute [one of the operations] or if we want to [another operation], the risks we address around that are very outcome-focused. How do we execute, how do we achieve the objective we try to achieve. So I would say in [an operational] sense, we are very sort of outcome-focused.
(Organisation C, Operator group 2)

A collaborative environment forms a smaller part of the organisation’s risk cultural environment. Sharing risk information occurred only in certain situations such as risk reporting within a project while effective cooperation and participation in managing risk only happened
sporadically. A couple of members pointed out that, in some cases, risk management collaboration was a ‘forced’ or ‘facilitated’ participation.

Under a weak collaborative risk cultural environment, many members did not agree that their environment had a supportive characteristic in managing risks. Rather, most members viewed that the environment was reactive while openness to communicate risk was not actively supported in Organisation C. A possible reason could be that senior management may not articulate risk messages and the organisation placed a greater importance on confidentiality across different functions, so sharing tended not to be an option, as indicated by an interviewee.

*I think our big issue now is that support, because I am sure the senior executives support it and all of that. But just being able to get more senior people to outwardly talk about risk management so that lower level people say “Oh, see look, they talk about risk management. They do risk management.”* (Organisation C, Executive group 6)

*I guess a lot of the risk assessments that are done here [in Organisation C] and you know even the products from them are restricted, they are classified. ... they come from sensitive information that don’t get communicated. So a lot of the outcomes are, ... something changes “OK, we are now going to this.” But I don’t think there is enough [communication or sharing that] this is ‘why’. And some cases it can’t be because it is classified information.* (Organisation C, Operator group 4)

A weak innovative environment was observed in Organisation C. More than half of the interviewees agreed that the organisation as a whole preferred to retain the traditional ways of managing risk though the aspiration of being innovative has been expressed continuously by the executives and senior management. Participants alluded that the organisation had only a small pocket of examples nurturing an innovative environment where members found a new or different way of carrying out an operation because these functions were designed to be innovative. Nonetheless, the organisation’s aspiration articulated in corporate documents did not get distributed across various functions and teams.
[My organisation is] very concerned on not taking risks and being ‘risk averse’. Reliability and dependability is privileged over innovation and commercial risk/return investing. (Organisation C, Operator group C 114)

[As [an operational] agency, there is a shared onus, if you would like, not to fail because failure can mean harm, you know, a failure to deal with crime or deal with incidents has consequences. So in that sense, that is a really dominant factor in terms of culture. ... the consequence of that [failure] been a tradition so there is a quite a conservative and risk averse culture (Organisation C, Executive group 5)

There are pockets within the organisation C who are more innovative than others. Because they are specifically designed to be innovative. (Organisation C, Operator group 1)

From the preferred composition of the risk cultural environments in Figure A12.1, members in Organisation C preferred an increased degree of a collaborative and an innovative environment while decreasing the current level of a controlling and a goal-oriented environment. Participants still thought that it would be acceptable to have a composition with a higher controlling environment than other three cultural environments due to the nature of the organisation as an operational agency, binding to a greater number of external regulations and internal rules.

The executive group considered the organisation requires an increased collaborative and innovative risk cultural environment (see Figure A12.2). Participants from this group highlighted the importance of being collaborative in the organisation because risk information can be easily shared and accessed.

Interestingly, the operator group still wish to retain a greater level of a controlling environment while believing their goal-oriented risk cultural environment is to be maintained at the similar level (see Figure A12.3).
Figure A12.2 Organisation C’s composition of the risk cultural environments perceived by the executive group

Figure A12.3 Organisation C’s composition of the risk cultural environments perceived by the Operator group
Appendix 13. Organisation C’s risk mechanisms

This section explores the formal and informal risk mechanisms available in Organisation C, members’ perception on the helpfulness and the use of such mechanisms.

The responses from the questionnaire revealed that members of Organisation C considered informal risk conversations outside meetings most helpful. Risk management framework, learning from risk management role models and informal meetings, brainstorming, and networking were also considered helpful (see Table A13.1).

Participants from the executive group valued formal risk workshops most, followed by informal brainstorming sessions, discussions outside meetings, informal networking with relevant risk management stakeholders, and informal risk management meetings. It was noted that interaction arising from the use of informal risk mechanisms tended to be considered helpful by this group in the course of undertaking its jobs.

Similar to Organisation B, the roles of the risk management function in Organisation C as a risk mechanism appear to orient around ‘independent overseers’ (Kaplan and Mikes 2016, p. 11) since it primarily focused on establishing and reviewing the risk management framework and collating risk registers to report to the executives and senior management. According to an interviewee, the risk management function used to provide a number of pages of spreadsheet-based risk information in the past. However, the risk management function changed its approach by summarising and reporting on critical risks with more visual presentation. With the change of its reporting, the executives and senior management started to request risk information more frequently than before. This highlights that the risk management function’s intention to expand its role as ‘business partner’ by providing strategic advice to the top.
Respondents from the operator group perceived that discussion outside meetings on risk management were helpful, followed by visual presentation of risks such as risk maps and risk matrices and learning from risk management role models. In general, the level of helpfulness perceived by the operator groups was lower than that by the executive group.

The formal mechanisms such as Organisation C’s risk management framework and visual presentation of risks were regarded as moderately helpful by operators. They commented that these formal mechanisms provided consistent and prompt guidance on the way members manage risks.

The framework is useful because of [risk] categories which linked to strategic risks, categorising into the same [common] languages. The framework also makes you think about other risks [that I didn’t think about before], the definitions of impacts and likelihood, and whether you need treatments or not. (Organisation C, Operator group 3)
Table A13.1 Helpfulness of risk mechanisms

<table>
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<th>Risk mechanisms</th>
<th>Total Mean (SD)</th>
<th>Total Median</th>
<th>Total Minimum</th>
<th>Total Maximum</th>
<th>Executive group Mean (SD)</th>
<th>Executive group Median</th>
<th>Executive group Minimum</th>
<th>Executive group Maximum</th>
<th>Executive group vs. Operator group Mean (SD)</th>
<th>Operator group Mean (SD)</th>
<th>Operator group Median</th>
<th>Operator group Minimum</th>
<th>Operator group Maximum</th>
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*Mann-Whitney U test - Exact Sig. (2-tailed)
**p < 0.05
With respect to the use of risk mechanisms, results from the questionnaire responses revealed a balanced use between formal and informal mechanisms (see Table A13.2). Organisation C’s risk management framework was used most among the formal mechanisms. Discussion outside meetings was as the most used informal mechanism.

The use of visual presentation of risks such as a risk heat map was also mentioned by participants. Interviewees indicated that executives were receiving some forms of visual presentation of risks regularly while other levels of management, such as senior managers, were not frequently provided with risk information other than regular formal reporting documented in an excel spreadsheet that is difficult to take in. One senior manager had to create a risk heat map and chart in their function’s own style so that the manager could effectively recognise and communicate risk information within the function.

*I do it [visual reporting] for myself. That is why exactly that graphical piece [the risk matrix map with sticky notes] is important that I know that things are moving in the right direction or it is not.* (Organisation C, Executive group 2)

As indicated by many interviewees, learning from risk management role models was considered as an important risk mechanism because the organisation’s members placed greater value on an informal learning and experience during their career. In addition, feedback from executive and senior managers was used when participants managed risk.
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<td>3.15 (1.04)</td>
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<td>2.92 (1.00)</td>
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<td>1.00</td>
<td>5.00</td>
<td>2.67 (1.16)</td>
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<td>5.00</td>
<td>3.00 (1.05)</td>
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<td>Support provided by the risk management function</td>
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<td>1.00</td>
<td>5.00</td>
<td>2.29 (1.45)</td>
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<td>1.00</td>
<td>5.00</td>
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<td>Risk Management Training</td>
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<td>1.00</td>
<td>5.00</td>
<td>2.06 (0.97)</td>
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<td>4.00</td>
<td>2.13 (1.14)</td>
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<td>5.00</td>
<td>0.989</td>
</tr>
<tr>
<td>Risk management workshops</td>
<td>1.91 (0.94)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.24 (1.09)</td>
<td>2.00</td>
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<td><strong>Informal mechanisms</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion about risk management outside meetings</td>
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<td>3.00</td>
<td>1.00</td>
<td>5.00</td>
<td>3.43 (1.03)</td>
<td>3.00</td>
<td>1.00</td>
<td>5.00</td>
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<td>3.00</td>
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Table A13.2 The use of risk mechanisms
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Learning from risk management role models</td>
<td>2.83 (1.18)</td>
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<td>2.94 (1.06)</td>
<td>3.00</td>
<td>1.00</td>
<td>4.00</td>
<td>2.87 (1.21)</td>
</tr>
<tr>
<td>Meetings on risk management</td>
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<td>1.00</td>
<td>5.00</td>
<td>3.00 (1.04)</td>
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<td>1.00</td>
<td>5.00</td>
<td>2.67 (1.14)</td>
</tr>
<tr>
<td>Brainstorming sessions about risk management</td>
<td>2.63 (1.08)</td>
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<td>1.00</td>
<td>5.00</td>
<td>3.53 (0.94)</td>
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<td>5.00</td>
<td>2.45 (1.01)</td>
</tr>
<tr>
<td>Email communication about risk management</td>
<td>2.49 (1.06)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.62 (1.19)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.47 (1.04)</td>
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<td>Reporting process about risk management</td>
<td>2.37 (1.04)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.00 (1.07)</td>
<td>2.00</td>
<td>1.00</td>
<td>4.00</td>
<td>2.45 (1.04)</td>
</tr>
<tr>
<td>Networking with relevant risk management</td>
<td>2.37 (1.10)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.63 (1.03)</td>
<td>3.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.36 (1.10)</td>
</tr>
<tr>
<td>Reporting process about risk management</td>
<td>2.37 (1.04)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.00 (1.07)</td>
<td>2.00</td>
<td>1.00</td>
<td>4.00</td>
<td>2.45 (1.04)</td>
</tr>
<tr>
<td>Support provided by the risk management</td>
<td>2.14 (1.09)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.33 (1.16)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.12 (1.11)</td>
</tr>
<tr>
<td>Risk management workshops</td>
<td>1.56 (0.90)</td>
<td>1.00</td>
<td>1.00</td>
<td>5.00</td>
<td>2.11 (1.27)</td>
<td>2.00</td>
<td>1.00</td>
<td>5.00</td>
<td>1.47 (0.82)</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)
**p < 0.05
In relation to risk management happening through informal mechanisms, it was found that a majority of risk management for strategic or operational decision-making was undertaken through informal mechanisms such as casual risk conversations and informal risk assessment, which was not generally recognised as risk management in their organisations because they were not formally documented. Interviewees supported this finding and highlighted that informal risk conversations were used mostly to make decisions and to solve problems though the term ‘risk’ might not have been used in some cases.

*It [risk conversations] does [happen]. It is not termed in risk, but certainly if I have got a particular issue that I am dealing with, I will talk to other members and we will discuss what the implications are, which you could say as risks. I would say so, but that would be in an informal way, you know, bouncing it off somebody else, that sort of thing...* (Organisation C, Operator group 7)

*I think they [risk management through conversation and collaboration] are not just necessarily seen as formal risk assessment processes.* (Organisation C, Operator group 6)

In particular, many participants in Organisation C mentioned that their operational members managed risk informally owing to prior experiences on fields and learning from intensive training. Though these members did not use the language of ‘risk and risk management’ and did not complete the templates, these participants argued that informal mechanisms, such as a mental exercise of risk management, has been used frequently and ‘automatically’.

*Quite often people do risk matrix & risk management procedures as 'arse covering' for formal [risk management] and the real risk management occurs informally.* (Organisation C, Operator group C90)

*Most of our decisions would be a more intuitive, informal consideration of risk and so most [operational members] and certain senior executives would be thinking about risks to the organisation and risk to the operation and those types of things, but I would suggest it is not formally getting documented as a formal consideration of a particular risk and what treatment was applied. ... I think the members, particularly the switched-on members, or the members that are good at what they do, they are thinking about risks informally.* (Organisation C, Operator group 10)
When you get them [operational members] to stop and think about it, “Well, as a [main operational officer], you have done the dynamic risk assessment for ages. And you know you teach people that risk management is actually quite innate and we taught it from a very young age”. ... People just don’t understand that they are doing risk management all the time without realising it. So people do understand risks very well in this organisation and they do it automatically. (Organisation C, Executive group 6)

In addition, participants mentioned an informal mechanism that members tend to use frequently – knowledge and skills to manage risk from prior experiences in operational setting. As knowledge and skills gained from operational fields for twenty-five or thirty years were considered valuable in Organisation C, interviewees considered knowledge and skills acquired from previous risk management activities embedded in organisational processes as a crucial component of risk mechanisms.

Even from when I was in training, we were always told all it was “situational awareness” to be aware of what is going around you. We would be taught to stand in a certain way and just take to remain certain distances away from people to give ourselves enough room to react. That in itself is a risk assessment. ... So it is very important, it was just never called a risk assessment. ... So if you have a lot of experience, ... you go “I will do it this way because I know from previous experiences by doing it this way removes the risks.” (Organisation C, Operator group 1)
Appendix 14. Organisation D members’ BUAs and the purposes for which risk management is used

Table A14.1 presents members’ BUAs about the usefulness of risk management in Organisation D. Participants believed the BUAs that risk management was most useful in assessing downsides, followed by risk management for the purposes of strategic or operational decision-making, compliance-oriented risk management and risk management of policy-focused as well as providing advice to stakeholders. Overall, there was no significant difference in BUAs between the executive group and the Operator group across the four decision situations. This indicated the likelihood of the integrated BUAs that risk management was useful. There was also no clear evidence of differentiated BUAs according to the questionnaire responses.

Table A14.1 Organisational members’ BUA about the usefulness of risk management

<table>
<thead>
<tr>
<th>BUAs</th>
<th>Total</th>
<th>Executive group</th>
<th>Operator group</th>
<th>Executive group vs. Operator group</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk management is useful when members:</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Mean (SD)</td>
<td>Median</td>
<td></td>
</tr>
<tr>
<td>Assess downsides</td>
<td>4.09 (0.73)</td>
<td>4.00</td>
<td>4.25 (0.61)</td>
<td>4.00</td>
<td>0.958</td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>3.83 (0.78)</td>
<td>4.00</td>
<td>3.84 (0.48)</td>
<td>4.00</td>
<td>0.981</td>
</tr>
<tr>
<td>Focus on compliance</td>
<td>3.70 (1.08)</td>
<td>4.00</td>
<td>3.83 (0.62)</td>
<td>3.83</td>
<td>0.992</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or providing advice</td>
<td>3.66 (0.97)</td>
<td>3.75</td>
<td>3.75 (0.79)</td>
<td>3.50</td>
<td>0.986</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)
Usefulness scale: 1 - Not at all; 2 - Slightly; 3 - Moderately; 4 - Very; 5 - Extremely
The integrated BUAs were revealed when the interviewees were asked about their thoughts on the usefulness of risk management. In particular, most interviewees from the executive and operator group considered that there was value in undertaking risk management for compliance.

* I understand the needs and importance to spell out risks as we understand them. And as we understand, we are addressing them. And that inherently means documentation. So that understanding can be equally understood across the board. (Organisation D, Executive group 1)

*[T]*o make sure that we are sort of complying with the industry standards ... every organisation has to obey with is that there is the whole of government risk framework, security framework, PSPF (Protective Security Policy Framework) and the new ISM (Information Security Manual) every agency supposed to be put in all those bits in place to mitigate those risks. (Organisation D, Operator group 3)

Participants from the executive group agreed that risk management has been useful in their assessment of threats or harms and strategic decision-making. Most interviewees from the group also thought that many members would consider risk management useful in their duties.

* I think people know when to use them and where they are applicable or when they are not. (Organisation D, Executive group 2)

In Organisation D, the integrated BUAs was described as members’ having a mature risk culture and members understand the value of risk management.

*[O]rganisation D*, in my experience, probably has one of the most highly developed risk cultures that I have worked in, which is a good thing. Because of consciousness across staff, management and so forth, everybody understands the importance of risk, everybody understands the importance of managing risks. (Organisation D, Executive group 1)

Some interviewees from the operator group thought that risk management was either essential or useful for a certain purpose such as planning and prioritisation of operations.

* It [risk management] is essential. I think bad decisions are made by people who don’t consider risk. (Organisation D, Operator group 4)

* It [risk management] is a very good way to understand why you are doing something. So if you are doing something and it does not reduce
the risk or it does not produce the benefit to the business, there is a good question about why are you doing it. Then I find it very useful to identify because in business planning, if we go through a risk process and I compare it to the business activity list that they have given me or the descriptions that they have given me, I find it very useful to identify the gaps. Say “You identify these risks. But either not all your activities cover it or we have activities that don’t address the risks” So it [risk management] is a very good way of analysing what we are doing and making sure we are doing the right thing. (Organisation D, Operator group 5)

Despite the existence of the integrated BUAs between the executive and the operator groups, the in-depth interviews and comments from the questionnaires, revealed the fragmented BUAs within the operator group in the area of strategic and operational decision-making where high-level or day-to-day decision-making in performing members’ job were required. For example, during business planning and review processes which were conducted twice a year, certain middle managers considered risk management, such as completing risk registers as shelf-ware. This indicated that these middle managers may not think that risk management was useful for their decision-making. This was consistent with comments from the interviewee and the questionnaire.

I think for the managers in the way that they use it [risk management incorporated into business planning], it is, in a sense, it is a shelf ware. They have to do it and then it is done and it gets put on the intranet. I think it is a product of their thinking. It is an output. It doesn’t so much inform what they are doing. ... so in terms of how the document is used, I think that is probably where the exception is [the members did not think it useful]. (Organisation D, Operator group 6)

My organisation operates in a high-risk environment where [main operational areas] are routinely tasked to assist others in distress and poor environmental conditions. Some procedures, practices and policies address some risk management aspects; however, there is no culture of identifying and managing risk. (Organisation D, Operator group D24)

Similarly, other comments from the questionnaire responses and the interviews also revealed that a small number of middle managers and their team members had the BUAs that risk management was not useful for strategic or operational decision-making; rather it was the tick-
the-box exercise; and that the organisation as a whole may have headed to a fine line between risk management being onerous and not being excessive.

*I think we are compliance-focused. So to do as little as we need to meet the requirements of various legislations or requirements of the government and so forth or you know the public sector requirements. I just feel like we are doing what we have to through we are getting a bit better. There are the areas that are better than others.* (Organisation D, Operator group 1)

Interestingly, some interviewees thought it was acceptable that members were not aware of themselves managing risks and do the tick-the-box risk management as long as procedures incorporating risk management exist and these are followed by members.

*Yes, I am OK with that [members not being conscious of the fact that they manage risk]. As I said, it is a catch 22 for those of us working in risk management. But in terms of people doing their job, they want to know they are safe to do their job, they want to know that they have right tools to do their job. And whether they call it risk management or whether they call it as a business decision tool, or whether they just call it the system they use, to me it doesn’t matter.* (Organisation D, Executive group 4)

Other interviewees did not consent to this view, commenting that it would be better for members to see the value of risk management (Organisation D, Operator group 5) and to “have a better understanding of how to do it and the importance of it” (Organisation D, Executive, senior management and risk management function 6).

In regard to the purposes for which Organisation D members adopted risk management, Table A14.2 shows that members mainly used risk management for assessing downsides. Risk management was also used for the purpose of compliance, strategic or operational decision-making and policy-focused and providing advice to stakeholders.
Table A14.2 Organisational members’ use of risk management

<table>
<thead>
<tr>
<th>Use</th>
<th>Total</th>
<th>Executive group</th>
<th>Operator group</th>
<th>Executive group vs. Operator group</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Mean (SD)</td>
<td>Median</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Assess downsides</td>
<td>3.86 (0.95)</td>
<td>4.00</td>
<td>4.00 (0.45)</td>
<td>4.00</td>
<td>3.82 (1.05)</td>
</tr>
<tr>
<td>Focus on compliance</td>
<td>3.79 (1.05)</td>
<td>4.00</td>
<td>3.71 (1.15)</td>
<td>4.00</td>
<td>3.82 (1.04)</td>
</tr>
<tr>
<td>Make strategic or operational decisions</td>
<td>3.60 (0.80)</td>
<td>3.60</td>
<td>3.70 (0.67)</td>
<td>3.70</td>
<td>3.57 (0.85)</td>
</tr>
<tr>
<td>Focus on the development and implementation of policy or environmental scanning</td>
<td>3.44 (0.86)</td>
<td>3.50</td>
<td>3.83 (0.54)</td>
<td>3.75</td>
<td>3.32 (0.91)</td>
</tr>
</tbody>
</table>

*Mann-Whitney U test - Exact Sig. (2-tailed)
Frequency of use scale: 1 - Never; 2 - Occasionally; 3 - Sometimes; 4 - Frequently; 5 - All the time

In line with the BUAs, members used risk management most in assessing downsides. Participants from the executive group commented that they continuously identify and evaluate downside risks in their core operations so that they could promptly find solutions for potential threats. For example, an interviewee commented on the use of temporary contract to address the downside risks as a result of a delay in operation.

*The delay and ... the risk that was creating and that was unacceptable so having temporary contracts in place to fill that gap. (Organisation D, Executive group 3)*

To assess downsides, participants from the Operator group also used risk management to prevent WHS, construction security, or reputation risks.

*I work with the [operational] response team, so we run the system, running their work health safety registers and there, ... when they practise a deployment, [they] create a risk register for that. (Organisation D, Operator group 5)*

*They [one of main operations] are quite high risks because we are demolishing [objects] and we are bringing construction work and these things we made 100 years ago they got lead hanging and they got...*
asbestos and they are quite risky. So risk management approach to that is very detailed and thorough and there is lots of checks and balances. And that is appropriate. (Organisation D, Operator 1)

[A] high-level process that ensures that we are remaining cognisant of the sort of unknowns around us or the events that could damage the organisation D in some way, our reputation, our processes or our funding. (Organisation D, Operator group 6)

Apart from the use of risk management in assessing downsides, members adopted risk management to comply with internal and external requirements as well as to monitor the level of compliance.

We are part of looking at what does the organisation need to do to stay compliant with the legislation, to comply with the government regulations, to stay compliant with the industrial relations law and so forth. So it is largely about compliance. (Organisation D, Executive group 1)

[T]o make sure that we are sort of complying with the industry standards ... every organisation has to obey with, not necessarily comply to, but what we are looking to comply to is that there is the whole of government risk framework, security framework, PSPF (Protective Security Policy Framework) and the new ISM (Information Security Manual) every agency supposed to be put in all those bits in place to mitigate those risks (Organisation D, Operator group 3)

In addition, the executive group used risk management for planning and prioritising and allocating resources for the planned priorities. They also advised that risk management was adopted to prepare for uncertain events or to prevent the effect of threats to the organisation.

It is about making a good management practice and good decision making around either maximising the potential of what the organisation can achieve or not being compromised by unseen or unanticipated issues. (Organisation D, Executive group 1)

Some interviewees from the executive group commented that they used risk management often in providing advice to stakeholders, including other executive and senior managers. Some operator groups also agreed that they used risk management for providing advice to managers.

[I]t [risk management] allows for...as you know transparency and clarity. So I use a risk management cycle all the time. And most my
correspondence either verbal or written is framed in risk management: “What is in it for you? When do you have to do it by?” ... Senior decision makers only want to see what they have to do by when. And I give them options. So good options to the worst options and hint, hint, hint “this is the option we recommend”. (Organisation D, Executive group 5)

The job of providing risk and likelihood around for the people with authority to make decisions...I make a lot of guidance and recommendations based on the risk of what options versus the other and that might be business not getting an outcome and what the impacts of that. (Organisation D, Operator group 3)

Although undertaking risk management to improve their operations was not frequent, participants from the executive group commented that they looked for opportunities through an improvement to the existing risk management uses or a mechanism such as an opportunity register.

The opportunity there, of course, is that we can actually do better and save people’s lives so as opposed to looking at it as the changes our entire organisational risk profile. (Organisation D, Executive group 3)
Appendix 15. Organisation D’s current risk cultural environments

This section discusses the composition of risk cultural environments in Organisation D. According to the questionnaire responses, participants perceived that a controlling risk cultural environment prevailed while a goal-oriented and a collaborative risk cultural environment were at a similar level. An innovative environment was perceived to be the weakest (see Figure A15.1).

Figure A15.1 Organisation D’s risk cultural environments

Some interviewees from the executive group provided the rationale as to why the organisation possessed a strong controlling risk cultural environment. It was considered as necessary to build strict rules and processes because the organisation needed to place tight controls around daily
business and decision-making areas to uphold safety and regulations across all activities. The organisation embedded risk management in some of the rules to enable members to make decisions safely in a way which would ensure the level of safety and regulations.

* A large majority of our operational, as I have already described the [core operational area which requires maintenance of a high level of safety] officers, they just use risk management in part of their day to day processes. ... The reason for that you want to have some of the rules in place to allow people to make a decision safely. (Organisation D, Executive group 4)

With respect to a goal-oriented environment, there were mixed perceptions among members. Some participants from the executives and operator group thought that the organisation did not have characteristics of a goal-oriented environment because there was no conscious link between goals and risk management. Other participants, however, argued that the organisation nurtured a greater goal-oriented risk cultural environment in recent years since a stronger focus was placed on aligning members’ work to the organisational strategic goals and challenges that articulates associated risks.

* Our risks are all aligned to our strategic challenges so we have a clear line of sight as to which areas business these risks are affecting. (Organisation D, Operator group 6)

...as much as we use it [risk management] to set our strategic plan. (Organisation D, Executive group 3)

The extent of a collaborative risk cultural environment was considered to be as strong as a goal-oriented environment. Interviewees’ commented that the organisation possessed a certain extent of a collaborative risk cultural environment. They highlighted that members tended to share risk information across the organisation. An interviewee from the executive group attributed this to the organisation’s focus on problem-solving through discussions.

* ...when they [middle managers] meet up they will all put up their slides “Here are our top three risks. And it says discuss” So it is everyone’s
getting up there and if there is any kind of, “Oh, we have that one too in our top three or top five” (Organisation D, Operator group 6)

The characteristics of a collaborative environment, such as participation and interaction, was becoming more prominent since the organisation has evolved into a more collaborative risk cultural environment in recent years. For example, frank and honest discussions about the scale and severity of risks were observed by interviewees, though this tendency was more frequently found at the top of the organisation.

*I think that [participative characteristic] is permeated through the whole organisation.* (Organisation D, Executive group 2)

Other collaborative characteristics displayed in Organisation D included guiding and mentoring in managing risk, being open to discuss risks, and the executives and senior managers generally being supportive to risk management. Though it was not specific to the risk management solely, interviewees mentioned that executives and senior management are accessible and the organisation as a whole operated in a family-like environment, of which effect flowed to risk management.

*I think the organisation culture, it is very family, like a family and the CEO, and Deputy and executives* (Organisation D, Executive group 5)

The characteristics of an innovative risk cultural environment were not obvious in Organisation D. This type of environment was observed in some isolated cases, in particular, in a research function. In a new operational function, the organisation also took some risks to develop capabilities in managing emerging risks.

...*we are certainly taking a few calculated risks in the IT world in bringing some new capabilities, which the organisation has not used before and open things up and the business is seeing the benefit of it now* (Organisation D, Operator group 3)

In Figure A15.1, the preferred composition of risk cultural environments is described as a stronger collaborative and innovative risk cultural environment. The existing level of a goal-
oriented environment was considered appropriate by members while the extent of a controlling risk cultural environment was preferred to be reduced.

Participants from the executive group (see Figure A15.2) desired a greater level of a collaborative risk cultural environment while they also wished to have a stronger innovative risk cultural environment.

Operator groups preferred a more balanced composition of risk cultural environments, having a similar increase in the level of a collaborative and innovative environment (see Figure A15.3).

Figure A15.2 The executive group’s current and preferred risk cultural environment
Figure A15.3 The Operator group’s current and preferred risk cultural environment
Appendix 16. Organisation D’s risk mechanisms

In line with the findings of previous research (Katzenbach et al., 2012), Organisation D established a greater number of formal risk mechanisms than informal ones. Organisation D had standard formal risk mechanisms such as the risk management framework including a risk matrix and a risk management policy, online induction containing risk management training, an audit committee, business plans having risk management components, risk registers, a risk management IT system, operational processes incorporating risk management elements, and reporting processes. Informal mechanisms that the organisation’s members used were risk discussions or conversations outside meeting, networking, an informal risk-based approach for decision-making, risk-related advice from experts with experience, risk management role models, and learning from prior experience.

Table A16.1 displays the level of helpfulness of the mechanisms perceived by participants. Respondents indicated that the top three helpful mechanisms were informal mechanisms including discussions about risk management outside meetings, informal meetings, and learning from risk management role models. Formal mechanisms, which were perceived to be more helpful, were formal reporting process, a risk management framework, and risk management training.

Table A16.2 shows the extent of the use of risk mechanisms. Informal risk discussions outside of meetings were used most and to the similar extent of its perceived helpfulness. Following this, business plan that incorporates risk management, the Organisation D’s risk management framework and risk management training were used more than the other mechanisms. Despite the preference for informal risk mechanisms in terms of their helpfulness, members responded that they used formal mechanisms as much as the use of informal mechanisms because the
mandatory rules and processes required members to use these mechanisms regardless of their perception on its helpfulness.

In terms of the roles and helpfulness of risk management function, participants from the executive group had a view that the risk management function in Organisation D has been primarily responsible for providing support to the audit committee that oversee the organisation’s risk management framework and to the executives and senior management for their strategic decision-making. This approach is in line with the dual roles of the risk management function identified as ‘independent overseers’ and ‘business partner’ approach (Kaplan and Mikes 2016, p. 11) where the risk management function is engaged in compliance, internal controls, risk prevention (as an independent overseer) similar to Organisation B and C as well as the influence on key strategic decisions (as a business partner). However, there appeared to be a lack of engagement with operational decision-makers, which some interviewees and comments from the questionnaire desired to have.
<table>
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<tr>
<th>Risk mechanisms</th>
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<th>Operator group</th>
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*Mann-Whitney U test - Exact Sig. (2-tailed)
### Table A16.2 The use of risk mechanisms

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*Mann-Whitney U test - Exact Sig. (2-tailed)  
**p < 0.05
In Organisation D, despite the strong controlling cultural environment, informal risk discussions and conversations with executives and senior managers occurred frequently because of the organisation’s moderate size and having a reasonable level of the characteristics of a collaborative risk cultural environment such as openness, which made communication with the executives and senior management more accessible.

“We are a small organisation... you knew everyone. And we didn’t have a high turn-over. Because we are a small organisation, unlike working in a larger organisation, they are accessible. ... the executives are accessible. So if you have a problem you can go and talk to them. ... you can walk in and say, “Hi [head of Organisation D], I think we have a problem. You know these particular things, ...” And he turns around and goes “OK, what are you planning on doing?” You will probably find we are unique. (Organisation D, Executive group 4)

I have to communicate with the executives a lot, a lot of that conversation, a lot of the information we have to present is risk-based answers and options. (Organisation D, Operator group 3)

If business will very quickly say and it is a fairly open organisation, so if it [risk management] is not adding value if it is just bureaucracy, I will be told very quickly that it [risk management] is not working. (Organisation D, Executive group 3)

The formal mechanism of business plans incorporating risk management elements was mostly used though members did not rank it as helpful as other mechanisms. The use of this mechanism was due to the importance of this business planning process as part of Organisation D’s planning, as conveyed by a participant:

“In business planning, if we go through a risk process and I compare it to the business activity list that they have given me or the descriptions that they have given me I find it very useful to identify the gaps. (Organisation D, Operator group 5)

Nevertheless, an interviewee informed that the way the organisational business planning was developed did not help members’ thought processes, suggesting that risk management in business planning was a stagnant output. Hence, some Operator groups did not think it as helpful though they had to use it because it was part of a planning process.
I think for the [middle] managers in the way that they use it, it is, in a sense, it is a shelf ware. They have to do it and then it is done and it gets put on the intranet. I think it is a product of their thinking. It is an output. It doesn’t so much inform what they are doing. (Organisation D, Operator group 6)

Despite being considered as less helpful and less used, the topic of risk appetite and tolerance statements were brought up in the interviews. From the interviews, it was noted that Organisation D did not have an official risk appetite statement at the time of the interviews, but in the process of developing the statement. However, interviewees commented that a lot of the members in Organisation D were familiar with the unofficial risk appetite and tolerance levels for certain tasks. Being aware of these unofficial statements, some members raised concerns on a conservative risk appetites and tolerances in Organisation D. The participants understood that, in many cases, there were good intentions behind the executives’ and senior management’s low risk appetites. However, they argued that given the inherently-dangerous nature of certain Organisation D’s core business, there were certain residual risks that may not be further reduced on the basis of available resources.

[T]hey [executives] are all very passionate about getting everything low…I think I try to push and say “It is important that we don’t misrepresent what the reality of the situation is as well.” So we need to understand there is a limit that how low actually it could go and just recognise that there is something, what can you reasonably do, and if that reasonably action that you have taken and the result is moderate then that is what it is. (Organisation D, Operator group 1)

These members expressed the views of other team members and themselves that having a low level of risk appetites and tolerances without discussing the contexts of these risks may not facilitate healthy discussions around the development and implementation of appropriate strategies. Also, communication from executives and senior management regarding the requirement for members to reduce particular risks to a low level may not be perceived as realistic, and sometimes it made members feel that their continuous efforts were less valued.
On a positive note of the risk appetites and tolerances, communicating the informal risk appetite statements helped to initiate the interactions and conversations on managing particular risks, which is consistent with the findings in Jordan et al. (2013).

*The executive as I said in some aspects of risk management, particularly with WHS, we know exactly what their thoughts are. They just won’t tolerate. In some respects, yes it does allow us to understand it. In other ways it allows us to provide them with the information they need to make decisions. So it is nearly flipped.* (Organisation D, Executive group 4)

In discussing the establishment of official risk appetite and tolerance statements, one of the executives was sceptical about the value of establishing an official risk appetite statement because of its ambiguity. To illustrate, the interviewee questioned the actual value and meaning of a low appetite for any risks associated with the life of staff or the public or low to moderate risk appetite for stakeholder engagement and corporate performance. From his perspective, Organisation D was an institution, of which operations have large influences on people’s life and quality of life so it should be run differently from a normal risk management practice such as a risk appetite that was invented and used by private sector organisations.

The interviewees and some comments from the questionnaires highlighted three major risk mechanisms that were not included in the questionnaires. Firstly, support from the top was perceived positively in Organisation D. For instance, where there was a risk associated with abusive behaviours of clients to staff, the executives sent out the message including risk treatments and their expression of a support for an employee’s decision.

*I think we are fortunate in Organisation D that we have very grand executives that know [what] all the staff are doing and understand risks they are facing.* (Organisation D, Operator group 4)

*[T]here is that risk management thinking that they were expecting from people. ... we have got a very firm strong leadership.* (Organisation D, Operator group 6)
Another risk mechanism was an award program that recognised members who demonstrated behaviours in line with the organisational value in work and safety fields. An interviewee believed that this award program developed an incentive to members to integrate their BUAs into the organisational one.

In Organisation D, subject matter experts were considered as an important network in managing risk. As many staff came to Organisation D after obtaining major experiences from similar industries, managing risk in fields was natural to them, being familiar with the types of risks that the organisation faced. Hence, many participants raised this risk mechanism in interviews in that they often contacted these subject matter experts when they needed to manage risk in a specific area.