Exploring the lived experience of Individual Foresight in organisations

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Exploring the lived experience of Individual Foresight in organisations

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Abstract

Individual Foresight (IF) is a valuable human ability that is not yet well understood in terms of its contribution to everyday work outcomes and organisational success. Understanding how employees utilise IF to achieve work outcomes and contribute to organisational goals could facilitate strategic human resource management (SHRM) practices that seek to identify, foster, and develop IF to build competitive advantage. Positioned in the KBV of the firm and focused on understanding the microfoundations of knowledge based dynamic capabilities (Zheng, Zhang, & Du, 2011), this study sought to understand the role and value of IF in organisations, firstly from the perspective of HRM professionals. It then explored the experience of employees who use IF to gain understanding about how foresight is manifested, utilised, and contributes to work and organisational outcomes. The overall research question this study addressed was: *From the perspective of human resource management professionals, and through the experience of employees, what is the current understanding of individual foresight in organisations?*

Management literature has predominantly focused on the *strategic* role of foresight in organisations (Iden, Methlie, & Christensen, 2017; Rohrbeck, Battistella, & Huizingh, 2015; Slaughter, 1995), specifically for future planning. Whilst the business literature positions individuals as an important part of the strategic foresight process for organisations, it provides limited clarification about how individuals *do* foresight; or more specifically how they *experience* foresight in organisations. This study involves two phases, each adopting their own research design, undertaken in sequence. Phase One involves six in-depth interviews (Thematic Analysis) with HRM professionals across a range of industries to understand their perspective on foresight; while Phase Two involves 27 in-depth (Interpretive Phenomenological Analysis) interviews with employees from selected case organisations across two industries to develop and describe the *essence* of the individual experience of foresight.

Phase One data provided rich insights into not only the perceptions of foresight held by HRM professionals, but also the personal experiences of executives in using or observing foresight in their organisation. Emergent themes and sub-themes revealed three broad

areas: '*IF Characteristics and contributing factors*' (e.g., emotional intelligence, past experience), '*Challenges for developing IF*' (e.g., Culture, job role) and '*Outcomes of IF*' (e.g., influencing others, IF in the decision-making process) with final Phase One broad emergent themes including '*challenges of developing foresight in organisations*', '*individual foresight*', '*outcomes of individual foresight*', and '*human resources practices*'. A model of IF was presented and discussed, positioning broad emergent themes and their relevance for both IF in organisations, and Phase Two.

Phase Two IPA interviews produced insightful data from the 27 employees across two organisations (one in insurance and finance, and one in utilities). Through a detailed IPA process, beginning with within-case analysis and progressing to across-case analysis, ten super-ordinate themes were captured in a model of IF incorporating 'The Person', 'The Process', 'The Outcomes' and 'The Context' of the IF experience. 'The Person' detailed three super-ordinate themes that explained the composition and interaction of individuals experiencing IF, '*personal knowledge and experience*', '*individual skills and disposition*', and '*intuition*'. During 'The Process' of IF, '*learning collaboratively*', '*developing understanding*', and '*Cognition, reflection and future-thinking*' reflect an employees' ability to partake in the IF process in organisations. 'The Outcomes' of IF comprise '*decision*', '*action taken*', and '*formal policies and procedures*', revealing ways in which IF manifests and contributes to work and organisation performance, while 'The Context' summarised key findings associated with organisational culture that influence the IF experience in organisations. The findings revealed implications for HRM practitioners, as well as key contributions to existing theory and a future research agenda for IF. The IPA study resulted in a conceptual model for IF which illuminates the contextual setting in which IF takes place. Ways in which HRM practitioners can target organisational strategies to foster, develop and utilise IF knowledge to build foresight competence and gain a competitive advantage are proposed.

Declaration by author

This thesis *is composed of my original work, and contains* no material previously published or written by another person except where due reference has been made in the text.

I have clearly stated the contribution of others to my thesis as a whole, including statistical assistance, survey design, data analysis, significant technical procedures, professional editorial advice, financial support, and any other original research work used or reported in my thesis. The content of my thesis is the result of work I have carried out since the commencement of my higher degree by research candidature and does not include a substantial part of work that has been submitted *to qualify for the award of any* other degree or diploma in any university or other tertiary institution. I have clearly stated which parts of my thesis, if any, have been submitted to qualify for another award.

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Melissa Innes

Publications included in this thesis

No publications included.

Contributions by others to the thesis

No contributions by others.

Parts of the thesis submitted to qualify for the award of another degree

No works submitted towards another degree have been included in this thesis.

Research Involving Human or Animal Subjects

This research has been conducted in accordance with UniSC's Human Research Ethics Approval (#S191343). A copy of the ethics approval letter can be viewed in Appendix 1.

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When I was younger, I didn't have the foresight to know that one day I'd be submitting a PhD thesis about foresight. As I look around me on a day like today, I know that the only way I've arrived here in this moment, is to have lived through and experienced the enormous journey of the last six years, a journey I have shared with many inspiring people.

Foresight is a phenomenon we don't really think about in our daily lives until something goes pear-shaped and we reflect, 'hmmmm – I could have possibly gone about that in a different way!'. There are so many related and intricate factors of this amazing phenomenon – it has kept me entertained for years. I've learned more than I could have imagined – and not just about foresight, phenomenology, and epistemology - all the impressive words that are so fun at a family barbeque! My perspective has changed.

It is a true privilege to hear the stories of others. Here in Australia, we are incredibly fortunate to live in a safe, peaceful corner of the world. I have found it hard to imagine the atrocities unfolding in people's lives in other parts of this small yet fragile planet we all share. It is just unfathomable. And they will have many stories to share.

To learn about the lives of others has become one of my favourite things. Erle Levey has shown me the rich rewards of listening to, respecting, and sharing others' stories. For this, his friendship, and his support, I will be eternally grateful. Storytelling is such a simple yet remarkable way for others to share their unique journey and experiences with us – as this lesson in foresight has taught me. I often wonder why more people don't take time to sit and listen to the stories of all the amazing humans we walk this path with. I am grateful to all of my research participants for their generous gift of time, and the authentic, sometimes raw, emotional moments they shared with me as we uncovered the mystery of foresight together. I hope this thesis goes some way to acknowledging their incredible work efforts in their organisations. People are inherently good. I was reminded of this many times listening to their stories and sharing in their passion for their colleagues and their organisations.

One of the most surprising features that emerged from my research was the collaborative nature in which foresight manifests. Had I reflected more on the instances where foresight

featured in my life, I would have realised, I never did it on my own. Much like this thesis. My supervisors, Karen Becker, and Wayne Graham, continue to astound me every day in how they balance their personal lives, work responsibilities and being good, kind-hearted, supportive academic colleagues. They have demonstrated enormous trust in me, and guided me through this journey, always believing I would cross the finish line. Here it is! Thank you both for going above and beyond, and gently steering me in the right direction.

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Australian and New Zealand Standard Research Classifications (ANZSRC)

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FoR code: 1701, Psychology

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LIST OF ABBREVIATIONS USED IN THE THESIS

CCM CONSTANT COMPARATIVE METHOD

CFC CONSIDERATION OF FUTURE CONSEQUENCES

EFT EPISODIC FUTURE THINKING

EI EMOTIONAL INTELLIGENCE

FC FUTURES CONSCIOUSNESS

FLA FORWARD LOOKING ANALYSIS

GT GROUNDED THEORY

HRM HUMAN RESOURCE MANAGEMENT

IF INDIVIDUAL FORESIGHT

IPA INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

KBDC KNOWLEDGE-BASED DYNAMIC CAPABILITY

KBV KNOWLEDGE-BASED VIEW

KGC KNOWLEDGE GENERATING CAPABILITY

MTT MENTAL TIME TRAVEL

RBV RESOURCE-BASED VIEW

RPIS RESEARCH PROJECT INFORMATION SHEET

SCADA SUPERVISORY CONTROL AND DATA ACQUISITION

TA THEMATIC ANALYSIS

1. Introduction

1.1. Overview of the chapter

This study seeks to understand the lived experience of individual foresight (IF) in organisational settings. Chapter one begins with an overview of the study beginning with an explanation of the background of the study leading to the research question. The significance of the study for future organisational theory and practice is considered, and an overview of the methodology proposed to undertake the study is provided. Scope and limitations are identified; and the chapter concludes with an introduction to the remaining approach for the chapters.

1.2. Background of the study

1.2.1. Foresight in an organisational context

Foresight is a valuable human ability that is not yet well understood in terms of its contribution to organisational success. In everyday language, foresight can be described as how individuals think about the future and how they act now in anticipation of future events. The Oxford Dictionary defines foresight as 'The ability to predict what will happen or be needed in the future' (Oxford University Press, 2018). However, to understand whether IF is valuable to organisations, and if so, whether it can be managed in terms of contributing to the attainment of organisational goals, more research is needed.

Approaching foresight from an organisational perspective, the literature provides two major sources of knowledge about IF, and foresight in organisations. Firstly, the major reference to foresight in management literature refers to the value of foresight in *organisational* strategic planning (Cook, Inayatullah, Burgman, Sutherland, & Wintle, 2014; Iden et al., 2017; Rohrbeck et al., 2015; Slaughter, 1997). In this sense, foresight is viewed as a major source of competitive advantage for organisations through its role in the planning process (Major, Asch, & Cordey-Hayes, 2001; Portaleoni, Marinova, Ul-Haq, & Marinov, 2013; Voros, 2003). Secondly, focussing on *how* individuals apply foresight, vast literature is situated within the field of cognitive psychology. Here foresight is viewed as a cognitive

ability, referred to as *episodic foresight* which is defined as 'the ability to imagine diverse future situations and organize current actions accordingly' (Suddendorf, Bulley, & Miloyan, 2018, p. 26). Whilst recent organisational studies indicate a spiked interest in the role of the individual in the strategic foresight process (Balaraman & Sundarraj, 2017; Hines, Gary, Daheim, & van der Laan, 2017; Tapinos & Pyper, 2018) which was extended with Teece's (2007) proposed sensing, seizing and transforming activities of dynamic capabilities, there is still little known about how individuals apply foresight in organisations. This study considers the role of IF in organisations and seeks to understand IF from the perspective of employees *experiencing* foresight in organisations.

1.2.2. Strategic foresight

Strategic Foresight has been established as a core competence of firms (Major et al., 2001), and is thus considered by many as a major source of competitive advantage for organisations (Cook et al., 2014; Iden et al., 2017; Rohrbeck et al., 2015; Slaughter, 1997). Strategic foresight has also been argued to be a strategic tool used by organisations, to establish or maintain a strong market position (Cook et al., 2014; Slaughter, 1995); or as a process to improve organisational awareness through the use of scanning techniques to clarify emergent issues for the organisation (Slaughter, 1997). As the earliest proponent of strategic foresight, Slaughter (1997, p. 1) defines strategic foresight as 'the ability to create and maintain a high-quality, coherent and functional forward view and to use the insights arising in organisationally useful ways; for example: to deter adverse conditions, guide policy, shape strategy and to explore new markets, products and services'. To achieve this forward-looking and strategic view of the firm, Slaughter (1995) proposed four key, dominantly-cognitive actions, required of individuals: to *assess* implications of present actions, to *detect* and avoid problems before they occur, to *consider* present implications of future events, and to *envisage* aspects of desired futures for the organisation. However, despite the inherent requirement of human cognitive ability in Slaughter's strategic foresight process, most of Slaughter's discussion centres on the use of formalised tools such as environmental scanning, scenario analysis, and Delphi survey methods in the foresight process. At this stage in the strategic foresight literature, focus on the individual in the foresight process is limited.

Some researchers have proposed that foresight is just one part of a broader strategic foresight process for organisations (Horton, 1999; Voros, 2003). For example, Voros (2003) proposes a four-stage generic foresight process, involving inputs (gathering intelligence from various sources); foresight (analysis, interpretation, and prospection about factors and interrelationships); outputs (proposed outputs and resulting actions); and strategy (strategic decision makers' consideration of outputs). Voros' (2003) foresight phase, similar to the individual abilities described by Slaughter (1995), involves several types of cognitive processing (e.g., analysis, interpretation, and prospection), however, details about how individuals undertake these requirements of foresight are scant. In addition, some researchers argue that organisational members who do partake in future oriented activities, only do so sporadically, and therefore their thinking is inconsistent; and calls for a more embedded organisational capability of *foresightfulness* (Tsoukas & Shepherd, 2004). Chapter Two details the opportunity to position foresight as an organisational capability, positioning foresight as a potential micro-foundation of dynamic and managerial cognitive ability. In this regard, considering foresight as a cognitive or behavioural process may provide organisations with a better understanding of how foresight could contribute to a broader goal of organisational learning (Hodgkinson & Healey, 2011).

More recently, researchers have begun to focus on the role of the individual in the strategic foresight process. Portaleoni et al.'s (2013) qualitative investigation seeks to understand the role of managers in the foresight process. The authors found evidence of strategic foresight in the organisation and confirmed that this was manifested mainly in the top layers of management – in both formal and informal ways (Portaleoni et al., 2013). However, the study did not include an investigation of *how* these individuals participated in IF and was targeted at the managerial level of the organisation – so did not investigate how foresight exists in organisations across all employee levels. The question of how individuals *do* foresight is yet unanswered in the management or futures literature. However, this question has received much attention in the psychology literature, dating back to before strategic foresight was defined by Slaughter in 1995.

1.2.3. Individual foresight

For over four decades, researchers in cognitive psychology have been interested in the ability of humans to call on past memory systems to think about the future, and how this process occurs in the brain (Atance & O'Neill, 2001; Suddendorf, 2017; Suddendorf & Corballis, 1997; Tulving, 1972). Through the exploration of two memory systems, semantic (memory based on comprehension of facts, ideas and concepts) and episodic (memory based on personal experiences), Tulving (1984, 1985b, 2001) proposed that humans are able to draw on episodic memory in order to remember past experiences and imagine future scenarios. In addition, humans' ability to project themselves into the future (mentally) also requires *autonoetic consciousness* (self-knowing function of the brain i.e., self-awareness that an event *did* take place in the personal past) (Tulving, 1985b). This work was further developed by Suddendorf and Corballis (1997) in a seminal paper which proposed that humans partake in *Mental Time Travel* – either into the past (remembering) or future (imagining) – through use of the episodic memory system and autonoetic consciousness, and that this ability is unique to humans. The outcomes of this cognitive research present an opportunity to better understand IF in organisations.

Progress into *when* and *how* humans develop IF ability came with the publication of *Episodic Future Thinking* (EFT) by researchers Atance and O'Neill (2001). Atance and O'Neill (2001, p. 537) defined EFT as one's 'ability to project the self forward in time to pre-experience an event' and highlighted several research opportunities for further exploration of the foresight phenomenon. These opportunities included: investigating the role of EFT in the planning stage of prospective memory (i.e. memory for activities to be performed in the future (Kliegel, McDaniel, & Einstein, 2000)); investigating the potential for EFT to improve prediction accuracy in decision-making; and investigating the role of EFT in leading to higher goal attainment as a result of EFT in the *envisaging* process of goal-setting. Each of these opportunities are discussed in Chapter 2 with regards to their potential for improving organisational performance through the understanding of EFT.

The current term in cognitive psychology literature, which appears to be accepted by most scholars when referring to the ability of humans to project themselves into the future,

is *Episodic Foresight.* This term was proposed by Suddendorf and Moore (2011) in their introductory article to the special issue of *Cognitive Development* entitled 'The development of episodic foresight'. Again, this appears to be a turning point in the focus of scholars interested in this field of research and has united research efforts toward understanding the phenomenon. Episodic foresight is defined as 'the ability to imagine diverse future situations and organize current actions accordingly' (Suddendorf et al., 2018, p. 26), and a proliferation of research since 2011 has focused efforts on understanding how and when children develop episodic foresight (Atance, 2015; Atance, Louw, & Clayton, 2015; Atance & Sommerville, 2014; Boden, Labuschagne, Hinten, & Scarf, 2017; Martin-Ordas, 2018; Martin-Ordas, Atance, & Caza, 2014; Suddendorf, Nielsen, & Von Gehlen, 2011). In addition, other observations from the psychology literature pertaining to factors related to episodic foresight and EFT, are of interest to this study.

Issues related to time, age and neural disorders may impact foresight ability. For example, the issue of temporal distance (i.e., the time that separates an event – past or future – from the perceiver's present time) affects the level of detail reported in adult remembering and imagining (D'Argembeau & Van der Linden, 2004). D'Argembeau and Van der Linden (2004) found that as temporal distance increases, participants found it more challenging to envisage a precise episode – regardless of which direction they were travelling mentally (i.e., remembering or imagining). This may hold implications for organisations calling on specific individuals to either recall past experiences or plan future events in relation to important strategic choices for the organisation. In addition, there is evidence to suggest that age can be both advantageous or disadvantageous in memory function – which has been established as an important factor in episodic foresight (Addis, Wong, & Schacter, 2008; Lyons, Henry, Rendell, Corballis, & Suddendorf, 2014; Steinberg et al., 2009); and that other neural disorders such as Autism Spectrum Disorder (Murphy et al., 2017) and Alzheimer's Disease (Schacter, Benoit, & Szpunar, 2017) may also influence capacity for foresight. These issues form important considerations for organisations, and a better understanding of their role in IF in organisations could assist Human Resource Management (HRM) professionals in appropriate management of work allocation. These, and many other issues outlined above, provide the motivation behind this study.

1.3. Research problem and question

Despite the insights gained from the organisational and psychology literature, this literature has determined a major gap in the understanding of IF in organisations. Strategic foresight has been positioned as a valuable planning tool for organisations, yet the role of individuals in this process is poorly understood. The knowledge-based view (KBV) of the firm, which posits that organisational knowledge is one of the most important resources of an organisation (Grant, 1996; Haesli & Boxall, 2005; Wright, Dunford, & Snell, 2001) – offers an opportunity to position foresight as a valuable knowledge based dynamic capability that could contribute to firm performance (Zheng et al., 2011).

Through developing an understanding of the individual experience of IF in organisations, firms may be better positioned to formulate HRM practices that identify, foster, and utilise employee IF to contribute to organisational knowledge and learning. Understanding how IF manifests for individuals in an organisational context may help determine how valuable and rare IF ability is amongst employees, as well as whether it can be easily imitated by other organisations. To establish this understanding, the following overarching research question is proposed:

From the perspective of human resource management professionals,
and through the experience of employees, what is the current understanding of
individual foresight in organisations?

1.4. Significance of the study

This research seeks to deliver a number of benefits to organisations and communities. The outcomes of the study will have a wide range of potential benefits for organisations including the development of a framework that could be utilised to assist organisations to identify, foster, develop, and manage IF effectively in their organisation. More specifically, the proposed study initially seeks to make significant and unique theoretical, methodological, and practical contributions, which will be detailed below.

1.4.1. Theoretical contributions

This study seeks to explore and understand the phenomenon of IF in organisations. By exploring IF from the lived experience perspective of employees, it is anticipated that new knowledge will be gained to understand how individuals undertake foresight; why foresight is important to individuals and their work in organisations; and what contribution IF makes to everyday work outcomes and organisational learning. This understanding will potentially contribute to several areas in management and foresight literature.

First, in terms of strategic foresight initiatives in organisations, there is currently limited understanding of how individuals involved in the strategic foresight process engage in foresight activities, for example analysis, interpretation, and prospection. A better understanding of how individuals *do* foresight, particularly in the absence of formalised methods, will enable futurists to advance their own research in this arena. Second, this study offers an opportunity for cognitive and behavioural psychologists to understand IF within the context of organisations and from employees' perspectives. To the best of the researcher's knowledge, the literature has not yet made this connection, and this insight could encourage dialogue across disciplines about how episodic foresight is relevant and could make a valuable contribution to organisational effectiveness or competitive advantage. Third, the KBV of the firm posits that knowledge is a significant strategic resource of the firm; therefore, understanding knowledge associated with IF, for example how IF knowledge is developed, utilised, shared and valued by employees, could make a valuable contribution to theory supporting the KBV of the firm. Finally, in seeking to understand IF through a qualitative, inductive and interpretivist approach, there is potential for the study to contribute to an emerging model of IF in organisations. This model may provide a valued framework for future studies such as: establishing the role and interactions of IF in organisational performance; determining ways in which IF can be fostered in organisations; determining if is an ability that can be identified in the selection process and then fostered through SHRM approaches to influence potentially relevant aspects of leadership, job design, performance management, training and development and other organisational activities.

1.4.2. Practical contributions

From a HRM perspective, understanding the employee experience of foresight presents opportunities for organisations to manage, develop, foster, and facilitate the sharing of IF knowledge. By targeting HRM practices that foster this employee ability, organisations may build a unique knowledge base that could improve work outcomes. Arguably, there may be other related organisational issues, for example occupational health and safety, where IF may be determined (in future research) as a predictor of employee behaviour and performance outcomes. This study will contribute to knowledge of IF in organisations by seeking understanding of the phenomenon. Through the proposed development of an emerging IF model, this new knowledge could then be applied in future studies to investigate the effectiveness of potential strategies aimed at developing this unique human ability amongst employees.

1.5. Overview of methodology

The methodology for the study draws on ontological and epistemological perspectives related to the nature of the research. Considering the phenomenological nature of IF, as well as an intention to seek understanding of IF from an individual perspective, an ontological view that knowledge is the product of individual cognition and is therefore unique and subjective in nature, contributed to the adoption of an interpretive paradigm for the study (Burrell & Morgan, 1992). The interpretive paradigm implies that the researcher seeks to understand the social world *as it is*, that is, the researcher interprets the social world subjectively and through the experiences of those who are experiencing it (Burrell & Morgan, 1992). Given this approach, the research adopts two strategies of inquiry; Phase One adopts a thematic analysis and grounded theory approach, while Phase Two adopts a phenomenological approach. A constructionist approach is used to understand the organisational contexts in which HRM professionals take their roles and interactions with other organisational stakeholders (e.g., employees, managers etc) to negotiate social meanings in relation to IF. Grounded Theory (GT) is used to interpret and guide emergent concepts in relation to this context, and as providing an insight into the second and major

phase of research into employee IF. Phenomenology, or more specifically in terms of this study, hermeneutical phenomenology, is concerned with research that is interested in the lived experience of individuals. Particularly, given the hermeneutical (interpretive) nature of the chosen study, the method chosen for Phase Two is Interpretative Phenomenological Analysis (IPA) (Smith, Flowers, & Larkin, 2009). IPA is a qualitative research approach that enables the researcher to convey how people make sense of their lived experience (Smith et al., 2009). IPA has been described as a process of engagement and interpretation on behalf of the researcher (Smith & Shinebourne, 2012), which emphasises the interpretive nature of the method.

Congruent with the homogenous focus of phenomenological research (Smith et al., 2009), sampling will be purposive in nature, with purposive criterion sampling being applied for different phases of the research. Phase One involved six one-hour in-depth interviews with HRM professionals, who were selected through a purposive sampling approach. Individual in-depth interviews were conducted with each HRM professional to explore their perceived understanding of the role of foresight in their organisation, to gain valuable insight regarding their views on positions in their organisation where IF may be considered more critical. Twenty-seven Phase Two participants were then chosen with a purposive-criterion sampling method based on insights gained from the Phase One data collection. Phase Two participants took part in a one-hour in-depth IPA interview, with anticipation that the interviews would cease once saturation occurs. Morse (1994) explains that a researcher experiences saturation in the data collection process when they observe repetition in the data, or experience confirmation of previously collected data. This was not the case as interviews continued to contribute rich and sometimes unique insights into the phenomenon of IF in each participant's organisational context.

Interviews were audio recorded and translated into full transcripts for the purposes of IPA analysis. Various strategies were employed during data collection to ensure appropriate acknowledgement of the intersubjective nature of the IPA method, with reflexive *memoing* (or journaling) being employed during the data collection and analysis (NVivo) phases to contribute to the justification of objectivity in the write-up of the results.

1.6. Scope and limitations

The proposed research question delineates the focus for this study. The nature of qualitative data, and in particular IPA research, is such that *rich* data is sought from a smaller homogenous and purposively selected sample (Pietkiewicz & Smith, 2014; Smith et al., 2009) about the phenomenon in question – in this case – IF. The qualitative and inductive nature of this approach offers advantages that are consistent with IPA's ideographic nature, such as: accessing first-person accounts of detailed and rich information relevant to the experience of the participants; and accessing selected participants who may provide insight into certain aspects of the phenomenon being studied. This research is limited to the study of employees in Australian organisations, who undertake work where foresight is deemed an everyday aspect of the job. Due to the unknown nature of how foresight manifests in organisations, the criteria for determining these employees will be determined by the research undertaken with HRM professionals who hold key knowledge about work in their organisation. There are some limitations of this approach including the challenge of statistical generalisability, and the time required for in-depth interviews and IPA analysis.

This study, by nature, adopts an inductive approach and aims to consider multiple meanings of individual experiences – with an overall objective to develop an enhanced understanding of IF. This process of qualitative research is supported by Creswell (2013b) who argues that qualitative research is useful when a concept or phenomenon is not well understood because it has received little research attention. With its focus on individual experiences, and the exploratory nature of a smaller homogenous sample, the results from this study will not be considered statistically generalisable to (i.e., representative of) a wider population. To counteract this issue, (Yin, 2013, p. 325) argues that qualitative research (in particular case study research) can achieve analytic generalisation: 'the extraction of a more abstract level of ideas from a set of case study findings…that nevertheless can pertain to new situations other than the case(s) in the original case study'. As noted in Section 1.3.2, such inductive research can be used in future within a more predictive-deductive approach in survey research (e.g., in predicting which HRM activities best increase employee IF or how developing or selecting employees with IF impacts on firm occupational health and safety or

performance). However, as Flick (2014, p. 12) argues, 'Rapid social change and the diversification of life worlds increasingly confront social researchers with new social contexts and perspectives…[therefore] traditional deductive methodologies…are failing…[and] research is increasingly forced to make use of inductive strategies…'. This study hopes to contribute to a better understanding of IF in organisations, and through the potential development of an IF framework, aims to support future strategic approaches of organisations seeking to improve competitiveness through utilising the unique and rare knowledge and skills of their workforce.

1.7. Summary

Chapter one provided an overview of the research. A background to the research problem was presented, leading to the research question, an explanation of the significance of the study, the proposed methodology and a discussion of scope and limitations associated with the research. The purpose of this chapter was to provide an overview of the study in its entirety. Chapter two will present a review of relevant literature, while chapter three will describe the proposed sequential methods approach in more detail. Chapter four introduces the findings from Phase One interviews, resulting in a proposed framework of broad emergent themes of IF as perceived by the HRM professionals. Chapters five to seven present the findings of the IPA analysis for Phase Two. Chapter nine is the final discussion and conclusion chapter and presents implications for theory, methodology and practice for IF.

2. Literature Review

2.1. Overview of the chapter

This chapter investigates foresight literature from several perspectives. An initial overview of the literature details a chronological journey of business and psychology research as it relates to foresight. Organisational-level strategic foresight literature is then explored further, in most cases revealing an absence of understanding about how individuals contribute to the strategic foresight process. IF is then examined in psychology and business literature to gain further insight into the foundations of IF and how individuals might undertake the foresight process in organisations. Finally, IF is positioned as a valuable employee ability with potential outcomes valuable to organisations in terms of the KBV of the firm. The chapter concludes with a proposed integrated theoretical framework, drawn from the foresight literature and resulting in the proposed research question for the study.

2.2. Introduction and overview of the literature

Foresight is a common term often used in various forms, both in literature, and in everyday language. For decades, foresight has been positioned in business literature as a valuable component of successful strategic planning for organisations (Cook et al., 2014; Iden et al., 2017; Rohrbeck et al., 2015; Slaughter, 1997). Indeed, the majority of extant research into foresight concentrates on the many benefits that foresight contributes to organisational strategic thinking, planning and the attainment of competitive advantage (Major et al., 2001; Portaleoni et al., 2013; Voros, 2003). Whilst the following literature review highlights the contribution of foresight to the strategic advantage of firms, it also highlights the dearth of literature and attention focused on the experience of foresight at the individual level in organisations. It has been argued that organisational foresight can only be accomplished through the contribution of foresight by organisational employees (Balaraman & Sundarraj, 2017). Therefore, this literature review will build a case for the necessary exploration of foresight as a phenomenon that benefits individuals, to establish the value of foresight as a contributor to individual employee performance and managerial decision-making.

Examining the meaning behind the term foresight enables a better understanding of the variety of ways in which the term is used. Foresight has been limited in its more generic definition as 'The ability to predict what will happen or be needed in the future' (Oxford University Press, 2018). This rather ubiquitous definition implies that foresight is primarily an ability, but not necessarily an attribute of individual human entities. Analysis of this definition provides insight into why foresight, across the breadth of business academic literature, is presented in varied contexts and with a myriad of contradictory conceptualisations. The Oxford dictionary definition of foresight implies that as long as there is an ability to 'predict what will happen in the future' or 'predict…what will be needed in the future' (2018); then foresight is present. Humans, animals, robots and more specifically employees in the business world possess the potential to have foresight. This generic definition of foresight has enabled business researchers to apply the term loosely, in some cases, to describe forward-looking, cautious, or strategic consideration of either human beings, a phenomenon or an organisation. For example, a search of the term foresight in the business database *Scopus* revealed over 2000 documents that include the use of foresight in their title. Table 2.1 exemplifies the range of contexts in which foresight has been applied in academic business literature.

Table 2.1 Examples of foresight in academic literature

Journal article title	Foresight as…
On some fundamental methodological aspects in foresight processes (Lauster & Hansen-Casteel, 2018)	an organisational process
Episodic foresight deficits in regular, but not recreational, cannabis users (Mercuri et al., 2018)	a cognitive process
Collective action problem in heterogeneous groups with punishment and foresight (Perry, Shrestha, Vose, & Gavrilets, 2018)	a capability to anticipate future actions of group members
Analyzing Iran's science and technology foresight programs: recommendations for further practices (Hafezi, Malekifar, & Akhavan, 2018)	a national Science and Technology program
Hindsight, insight and foresight (Urbick, 2012)	a generic reference to thinking about the future

The exploration and application of the meaning of foresight presents a broad spectrum of foresight's usefulness in understanding both the present and future worlds. The

management literature has been predominantly centred around the strategic process of foresight in organisations, utilising foresight capability for future planning (see above reference to foresight as an organisational process). Across disciplines its multiple uses can be observed to describe science and technology programs and group or individual capability. A key area of relevance to this review, is foresight in the psychology literature. Drawing on multiple terms to describe the human cognitive abilities associated with foresight (for example episodic future thinking, prospection, episodic foresight, mental time travel), the concept of foresight has been linked to many areas of psychology including cognitive, social and personality, developmental, clinical and neuropsychology fields (Atance & O'Neill, 2001). This literature review will draw out differences and contradictions in the use and application of the term foresight, both at the organisational and individual levels.

First, to understand the value of IF in an organisational setting, strategic foresight and futures literature is explored (Section 2.3), where foresight is considered a strategic tool that contributes to an organisation's competitive advantage (Cook et al., 2014; Iden et al., 2017; Prahalad & Hamel, 1990; Rohrbeck et al., 2015; Slaughter, 1997; Voros, 2003). Next, and pertinent to the focus of this study, is that foresight is considered an employee ability, thus an individual's ability to process information, make decisions and then act in ways that contribute to outcomes for their job - and ultimately their organisation - will be examined (Section 2.4). Third, business and psychology literature is examined to determine that strategic foresight would not be possible without the cognitive ability of employees to process important information leading to more effective solutions and actions that contribute to organisational effectiveness (Amanatidou & Guy, 2008; Amsteus, 2008; Balaraman & Sundarraj, 2017; Chia, 2004; Hines et al., 2017; Hodgkinson & Clarke, 2007; Sarpong & Hartman, 2018; Tapinos & Pyper, 2018). As such, IF is positioned as a valuable source of knowledge in organisations, where strategic human resource management strategies could aim to identify, foster, and promote IF to achieve greater employee and organisational performance (Section 2.5). Through an enhanced understanding of IF in organisations, a proposed theoretical model derived from the foresight literature will facilitate the further exploration of IF in organisations.

Prior to examining the key findings from the literature, it is useful to understand the contexts in which foresight has been researched over time. The study of foresight is

prevalent in both psychology and organisational literature. Figure 2.1 chronicles a selection of highly cited and significant (in terms of significant contributions and/or insightful perspectives presented), journal publications exploring "foresight" across the past four decades within organisational and psychology research. The search was undertaken in the 'Scopus' database with articles classified according to the Excellence in Research for Australia (ERA) journal list produced in 2018 and were coded to the Field of Research (FoR) codes published within the Australian and New Zealand Standard Research Classification (ANZSRC). Publications representative of quantitative and qualitative studies, as well as conceptual papers were of interest to this study. Research areas that focused on key foresight concepts (for example memory systems involved, and associated terms of foresight in the literature such as 'Mental Time Travel' or 'Episodic Future Thinking' which are explored later in this article) were also included. The review revealed several important insights when positioning IF as a valuable employee ability worthy of greater attention by organisations.

Figure 2.1 Selected refereed journal articles focused on individual or organisational foresight research within the organisational and psychology literature

Year	Author(s)	Discipline Context		Methodology			Cognition in organisations*	Memory Systems	Mental Time Travel	Episodic Future Thinking	Episodic Foresight	Consideration of Future Consequences	Prospection
		Psych.[1]	Organ.[2]	Quant	Qual	Conceptual Paper Only							
1985	Tulving	✓		✓				✓	✓				
1987	Sherry and Schacter	✓				✓		✓					
1993	Tulving	✓				✓		✓	✓				
1994	Strathman, Gleicher, Boninger, and Edwards	✓	✓	✓								✓	
1997	Wheeler, Stuss, and Tulving	✓	✓			✓		✓	✓				
1997	Suddendorf and Corballis	✓				✓		✓	✓		✓		✓
1999	Zimbardo and Boyd	✓	✓	✓								✓	
1999	Horton	✓	✓			✓							
2000	Kliegel, McDaniel, and Einstein	✓		✓				✓					✓
2000	Major and Cordey-Hayes	✓	✓			✓							
2001	Major et al.	✓	✓			✓							
2001	Atance and O'Neill	✓				✓		✓	✓	✓		✓	✓
2003	Voros	✓	✓			✓							
2003	Cuhls	✓	✓			✓							
2003	Suddendorf and Busby	✓		✓				✓	✓	✓			
2004	D'Argembeau and Van der Linden	✓		✓				✓	✓	✓			
2005	Atance and O'Neill	✓		✓				✓		✓			
2005	Suddendorf and Busby	✓		✓				✓	✓	✓			
2006	D'Argembeau and Van der Linden	✓		✓				✓	✓	✓			
2007	Hodgkinson and Clarke	✓	✓			✓	✓						
2007	Suddendorf and Corballis	✓				✓		✓	✓				✓
2007	Schacter, Addis, and Buckner	✓				✓		✓	✓				✓
2008	Amanatidou and Guy		✓			✓							
2008	Popper	✓	✓	✓									✓
2008	Amsteus	✓	✓	✓			✓						

Year	Author(s)	Discipline Context		Methodology			Cognition in organisations*	Memory Systems	Mental Time Travel	Episodic Future Thinking	Episodic Foresight	Consideration of Future Consequences	Prospection
		Psych.[1]	Organ.[2]	Quant	Qual	Conceptual Paper Only							
2010	Suddendorf	✓				✓		✓	✓	✓	✓		
2011	Suddendorf and Moore	✓				✓		✓	✓	✓	✓		✓
2011	Suddendorf, Nielsen, and Von Gehlen	✓		✓				✓	✓		✓		
2011a	Amsteus	✓	✓	✓			✓						
2011b	Amsteus	✓	✓	✓			✓						
2011	D'Argembeau, Renaud, and Van der Linden	✓	✓	✓			✓			✓			
2012	Amsteus		✓		✓		✓						
2013	Sarpong, Maclean, and Davies	✓	✓		✓		✓						
2014	Szpunar, Spreng, and Schacter	✓	✓			✓	✓	✓		✓			✓
2015	Rohrbeck, Battistella, and Huizingh		✓			✓	✓						✓
2015	Atance, Louw, and Clayton	✓		✓				✓	✓	✓	✓		
2016	Rebetez, Barsics, Rochat, D'Argembeau, and Van der Linden	✓		✓				✓	✓	✓		✓	✓
2017	Suddendorf	✓				✓		✓	✓	✓	✓		✓
2017	Boden, Labuschagne, Hinten, and Scarf	✓		✓				✓			✓		
2017	Iden, Methlie and Christensen		✓			✓							✓
2017	Kaivo-oja	✓	✓			✓							
2018	Sarpong and Hartman		✓			✓							
2018	Tapinos and Pyper		✓		✓		✓						✓
2018	Stein, Tegge, Turner, and Bickel	✓		✓				✓		✓			
2018	Suddendorf, Bulley, and Miloyan	✓				✓		✓			✓		✓
2019	Coulter, Serrao-Neumann and Coiacetto	✓	✓		✓		✓	✓		✓			✓
2019	McCarroll	✓				✓		✓	✓	✓			✓
2020	Duffy and Cole	✓		✓				✓	✓	✓			✓
2020	Kvavilashvili and Rummel	✓				✓	✓	✓	✓	✓	✓		✓

Year	Author(s)	Discipline Context		Methodology			Cognition in organisations*	Memory Systems	Mental Time Travel	Episodic Future Thinking	Episodic Foresight	Consideration of Future Consequences	Prospection
		Psych.[1]	Organ.[2]	Quant	Qual	Conceptual Paper Only							
2020	Mazachowsky and Mahy	✓		✓				✓			✓		✓
2020	Fiset and Robinson		✓	✓					✓				
2020	Burt and Nair		✓		✓		✓						
2021	Opriş, Cheie, and Visu-Petra	✓		✓				✓		✓	✓		✓
2021	Cottini, Basso, and Palladino	✓		✓				✓					✓
2021	Brinums, Redshaw, Nielsen, Suddendorf, and Imuta	✓		✓							✓		
2021	Ahvenharju, Lalot, Minkkinen, and Quiamzade	✓	✓			✓			✓	✓		✓	✓

[1] FoR 17 – Psychology and Cognitive Sciences
[2] FoR 15 - Commerce, Management, Tourism and Services
*Note scarcity of organisational literature featuring cognition - highlighted

As demonstrated in Figure 2.1, there has been a spiked interest in recent years of research related to the role of individuals in the strategic foresight process in organisations. After nearly twenty years of business literature exploring foresight as a planning strategy for organisations, researchers have turned their attention to seeking a better understanding of how individuals undertake foresight work (Tapinos & Pyper, 2018), with consideration of foresight as a capability (Balaraman & Sundarraj, 2017; Baškarada, Shrimpton, & Ng, 2016) or competence (Hines et al., 2017) of employees. Interestingly, the psychology literature reflects a longer journey into understanding IF, or what it terms e*pisodic foresight*. Episodic foresight refers to 'the ability to imagine future scenarios and organize action accordingly' (Suddendorf, 2017). This term and its associated meaning also capture other research detailed in the psychology literature; terms such as *mental time travel into the future* (Suddendorf & Corballis, 1997), *episodic future thinking* (Atance & O'Neill, 2001), and *episodic simulation of future events* (Schacter, Addis, & Buckner, 2007) which all describe a similar phenomenon.

However, the integration of valuable knowledge from the psychology field related to the phenomenon of foresight, and application of this knowledge in the organisational process of foresight, is yet to occur at any recognisable level. There appears to be very few instances where a strategic foresight business reference has formally acknowledged the psychology literature associated with the human ability of foresight. One of these examples is Cuhls's (2017) research which utilises the concept of mental time travel to discuss a new method of foresight process in organisations. His research involved individuals partaking in a workshop exercise aimed at opening their minds through the use of mental images and imagining, encouraging them to mentally travel into the future (Cuhls, 2017). There is potentially much to be gained in the organisational realm from understanding the human cognitive abilities associated with the foresight process (Conway, 2022; Rhemann, 2019). Of interest to this study, IF abilities could assist HRM professionals in recruiting for foresight capability or developing foresight capability in their employees, potentially leading to enhanced employee performance and better business outcomes. To establish the importance of IF to organisations we need to examine the strategic foresight literature with greater depth first.

2.3. Strategic foresight

Foresight is considered a key component of successful strategic planning for organisations (Cook et al., 2014; Iden et al., 2017; Prahalad & Hamel, 1990; Rohrbeck et al., 2015; Slaughter, 1997; Voros, 2003). Within business literature, the proliferation of foresight as a tool (Cook et al., 2014; Slaughter, 1995), process (Horton, 1999; Major & Cordey-Hayes, 2000) or core competence (Major et al., 2001) of the organisation has highlighted the many benefits that foresight contributes to organisational strategic thinking, planning, capability, and attainment of competitive advantage (Major et al., 2001; Teece 2007; Portaleoni et al., 2013; Voros, 2003). Yet, the role of the individual in the strategic foresight process, and how individuals generate or utilise foresight, is less understood. This review of the strategic foresight literature seeks to establish the current understanding of the employee's role in the strategic foresight realm.

2.3.1. Early strategic foresight literature

The proposition of foresight as a strategic planning tool or process; and its location within futures studies, was established by Slaughter (1995), in his seminal work *The Foresight Principle.* In this work he proposes foresight not only as an individual attribute or competence but also as a process aimed at broadening the boundaries of perception through utilising scanning techniques to clarify emergent issues concerning the organisation (1995). Importantly, Slaughter (1995, p. 47) argues that foresight is primarily a part of 'the rich world of understanding and perception made possible by the human brain/mind systems', linking the ability of foresight to cognitive process, which will be investigated in Section 2.4. Slaughter (1995, p. 48) argues that foresight achieves this broadening of boundaries in four ways:

1. By **assessing** the implication of present actions, decisions, etc. (consequent assessment)
2. By **detecting** and avoiding problems before they occur (early warning and guidance)
3. By **considering the present implications** of possible future events (pro-active strategy formulation)
4. By **envisioning** aspects of desired futures (normative scenarios)

Slaughter's explanation acknowledges the role of human ability (or competence) within an organisation to assess, detect and interpret situations and information before

envisaging a desired future, positioning individual ability as central to the foresight process. Yet when one delves deeper into Slaughter's theory of strategic foresight in organisations, he explains the methodology of futures work in terms of formalised tools such as environmental scanning, scenario analysis, and Delphi survey methods that can be used in the foresight process rather than focussing on the individual differences observable in the phenomenon (Atance & O'Neill, 2001; Suddendorf, 2006; Suddendorf & Corballis, 2007). Further exploration of Slaughter's definition of foresight may explain this approach.

Strategic foresight attracts many definitions in the futures literature. Although the literature also identifies strategic foresight as *corporate foresight* (Rohrbeck et al., 2015), for simplification this study will use *strategic foresight* to refer to both terms. Slaughter (1997, p. 1) describes strategic foresight as:

> *'…the ability to create and maintain a high-quality, coherent, and functional forward view and to use the insights arising in organisationally useful ways; for example: to deter adverse conditions, guide policy, shape strategy and to explore new markets, products, and services'.*

As this definition conveys, the ability associated with creating and maintaining a forward view of the organisation demands several conceptual skills which Slaughter professes can be achieved through the use of formalised methods. Whilst there is certainly value in the utilisation of formal methods to assist in strategic foresight, this approach does not address the issue of how individuals generate or utilise IF in organisations in their daily work. Developing a strong understanding of the futures literature and how strategic foresight can be considered a core competence of the firm, will provide further foundation for this investigation.

2.3.2.   Strategic foresight: A core competence?

Strategically, the term foresight has been used in different contexts to describe similar objectives of competitive advantage. Some of the earlier literature on strategic foresight stemmed from the work of Major and his colleagues (Major et al., 2001; Major & Cordey-Hayes, 2000). Major et al. (2001) derived their research focus from an interest in the growing literature around foresight during the turn of the century, which they claim failed to explore adequately the relationship between foresight and strategy. Their research focus is to examine foresight as a core competence within the field of business strategy and they

apply their conceptual positioning of foresight core competence to a large national Foresight program, the *UK Foresight Programme* (Major et al., 2001). However, the evaluation of these foresight programs presented a challenge to researchers given the lack of clarification around the concept of foresight, and its apparent disassociation at the time with any form of strategic alignment (Georghiou & Keenan, 2006; Major et al., 2001). Major et al.'s (2001) response was to position foresight as a core competence of organisations, which also facilitates opportunity to grain greater insight into IF in organisations.

When positioning foresight as a core competence the positive implications for investigating IF can be more readily observed. Major et al. (2001) refer to Hamel's (1994) definition of core competence which professes that collective learning in organisations– one of the characteristics of core competence – does not reside in one single individual, but rather derives from many individuals or small groups in combination with the organisation's systems (*see also:* Alavi and Leidner (2001); Bollinger and Smith (2001); Spraggon and Bodolica (2017)). The emphasis on collective learning here highlights the importance of individual abilities. Major et al. (2001) validate this opportunity, identifying that their research failed to answer the question of how an individuals' foresight ability is transferred into a firms' foresight capability – leading to an organisational foresight culture. This opportunity is explored further in relation to Knowledge Management (KM) and the KBV of the firm in Section 2.5 below. Despite the potential need to explore IF further, many studies continue to target their contribution to improving the existing role of foresight as a strategic process.

2.3.3. Strategic foresight: A process

Two foresight process models further confirm the need to understand the role of individuals in the foresight process. Horton's (1999) three-phase foresight framework, and Voros' (2003) generic foresight framework situate foresight strategically. Voros (2003) identifies foresight as one element of strategic thinking, with strategic thinking being an input into strategy making and later strategic planning in organisations. A comparison of the two models is depicted in Table 2.2.

Table 2.2. A comparison of foresight process frameworks

Horton's (1999) foresight process	Voros' (2003) generic foresight process
Phase 1 **Inputs**: the collection, collation, and summarisation of information	Phase 1 **Inputs**: gathering of intelligence from a variety of sources
Phase 2 **Foresight**: the *translation* and *interpretation* of knowledge gained through the collection of this information – in order to form an understanding of its implications for the future, and	Phase 2 **Foresight**: the *analysis, interpretation,* and *prospection* of and about factors and their interrelationships
Phase 3 **Outputs and Actions**: the *assimilation* and evaluation of this understanding, leading to *commitment* to action	Phase 3 **Outputs**: the *outputs* of the foresight process, and the *actions* taken as a result of these outcomes (tangible and intangible)
	Phase 4 **Strategy**: consideration of the *outputs* to strategic decision-makers

Source: developed by the author

Voros (2003) utilises Horton's model as a broad structure, but also incorporates theory from Mintzberg's (1994) work on the separation of strategic thinking. He argues that it is important to separate the outputs of the foresight process from the actions required by strategic planners, which are based on these outputs (Voros, 2003). Voros seeks to position foresight as a valued contributor to the strategic thinking process undertaken by organisations when developing long-term strategic plans. The explanation of Voros' (2003) framework again positions foresight at the strategic decision-making level, involving the diagnosis of organisational positioning in its environment, and the explicit internal design processes around planning for strategic and future goals. Of interest to this study in relation to these two frameworks, are the activities described in the process of foresight.

As established, foresight involves the cognition of important information to arrive at improved performance outcomes for the future. Voros (2003) and Horton (1999) identify several cognitive processes undertaken as part of Phase Two of the foresight process, including analysis, translation, interpretation and prospection. Horton's (1999) model highlights that managers do not always know how to interpret new knowledge and generate future scenarios for their organisation – sometimes requiring the involvement of a third party in this process. This reference points to the value of social learning in organisations, where valuable knowledge stems from the exchange of tacit knowledge between employees (Hamel, 1994; Nonaka, 1994). Tacit knowledge can be defined as the cognitive (e.g., mental models stemming from "schemata, paradigms, beliefs, and viewpoints") and

technical (e.g., "concrete know-how, crafts and skills" specific to a situation) elements of personal knowledge gained through personal experience (Nonaka, 1994, p. 16). Often tacit knowledge is difficult to access, yet the sharing of this knowledge is deemed crucial to organisational learning, innovation and/or success (Ganguly, Talukdar, & Chatterjee, 2019; Obrenovic, Du, Godinić, & Tsoy, 2022). Sections 2.4 and 2.5 below will further explore cognition and the potential role of KM in the IF process.

In contrast to Horton's process model of foresight, Voros (2003, p. 15) seeks to elaborate the foresight process and acknowledges the role of foresight practitioners in engaging with multiple tools across the three steps of the foresight phase including:

Step 1   **Analysis**: Trend analysis, cross impact matrices and other analytical techniques

Step 2   **Interpretation:** Critical future studies…causal layered analysis….systems thinking and other '*depth* approaches to future thinking', and a '…generalised approach to layered analysis'

Step 3   **Prospection:** Scenarios *visioning* and *normative* methods…backcasting…a systems map or causal loop diagram.

However, despite the cognitive processes implied in both models, there is greater insight to be gained through understanding the role of the individual in the foresight process. These foresight frameworks, with their strategic objective of organisational outputs, and their limitation in understanding the role of individual cognitive capabilities or personal knowledge and experience in the foresight process, fail to describe *how* individuals translate, analyse, interpret, and prospect information and situations when engaging with foresight. This issue prevails in recent studies investigating (for example) use of scenarios in foresight, where Curnin, Brooks, and Brooks (2022) suggest future research around scenario planning should seek to better understand the role of critical thinking and other human capabilities in the process. Perhaps compensating for the lack of understanding about the role of the individual, strategic foresight has been argued as a valuable strategic 'skill' for overcoming the pitfalls associated with individual behaviour in organisations – and is valued by organisations as such.

2.3.4.   Strategic foresight: An organisational skill

Strategic foresight has been positioned as valuable in overcoming limitations of human behaviour associated with organisational contexts. Acknowledging the role of strategy in supporting an organisation contending with environmental uncertainty, Tsoukas

and Shepherd (2004) argue that strategic foresight is relevant in overcoming the limits of strategic planning and forecasting when managing a future that is essentially unknown. In positioning foresight as a strategic level organisational skill, the authors posit that this organisational skill overcomes the limits of individual behaviours, which are heavily influenced by organisational settings (Tsoukas & Shepherd, 2004). They argue human behaviour is 'regularized and normalized…through the authority relationship' and that this relationship 'homogenizes … individual cognitive maps and, through management control systems, elicits certain intended behaviours' (Tsoukas & Shepherd, 2004, p.3). This observation reinforces the value placed on *foresightfulness* as an organisational skill or competency, which the authors propose becomes important when the organisation needs to respond quickly (Tsoukas & Shepherd, 2004). This organisational-level application of foresight may point to the important role of IF in contributing to strategic organisational responsiveness.

Tsoukas and Shepherd's proposition that an individual's contribution at a strategic level is limited by certain organisational settings - may highlight the need to understand how IF could be fostered at certain levels in the organisation. Referring to the role of experts or senior managers in organisations, Tsoukas and Shepherd (2004) propose that these individuals may, at times, partake in future oriented thinking. Their inference is that this type of thinking is inconsistent – thus the need for foresightfulness to become an embedded organisational capability (Tsoukas & Shepherd, 2004). The dynamic capabilities framework is discussed in Section 2.4, however, this reference to building foresightfulness as a capability supports the need to understand IF and its role in the microfoundations of dynamic and managerial cognitive capability. This view is supported by Hodgkinson and Healey (2011, p. 1501) who advocate that 'increasing attention to the cognitive and behavioural processes underpinning the capabilities that promote organisational learning, adaptation and performance' is necessary in the development of dynamic capabilities. More recently Wenzel, Danner-Schröder, and Spee (2021) also called for a more ethnographic approach to understanding the more "detailed observations of the actions involved in enacting organizational routines" (p. 401). These are important perspectives to consider when undertaking research to understand operational phenomenon such as IF in organisational contexts.

The proliferation of literature positioning foresight alongside strategy continues into the late 2000s. In their *Handbook of Research on Strategy and Foresight*, Costanzo and MacKay (2009) present a collection of research relevant to the value of strategic foresight at the level of strategic planning and decision-making for organisations. They incorporate numerous works defining the concept of strategic foresight, and the value of strategic foresight as a managerial competency in assisting organisations achieve a competitive advantage (Costanzo & MacKay, 2009). In acknowledging the competency-based origin of strategic foresight in managers, Costanzo and MacKay (2009) identify important unanswered questions regarding the phenomenon of foresight, such as how it is defined, why it is important to organisations, and how it could be nurtured through the application of appropriate systems and practices. Rather than exploring how employees engage in IF in organisations, however, their own text continues the strategic foresight investigation by referring to the value of strategic foresight in activities such as prediction, forecasting and scenario planning; setting the stage for further exploration through their text for firms to cultivate, practice and plan for the future utilisation of various strategic foresight tools (Costanzo & MacKay, 2009). Entering the decade of 2010 however, there have been more recent efforts to explore the role of the individual in practices and processes associated with strategic foresight.

2.3.5. Strategic foresight: What about the role of the individual?

In a qualitative investigation of corporate foresight and strategic decision-making, Portaleoni et al. (2013) seek to understand the influence of managers on the foresight process in organisations. Their study acknowledges the role of the social actor in the corporate foresight process, applying an interpretive approach to a single case study involving a European Bank. They argue that the foresight process is integrated with strategic decisions of the firm and is also influenced by the heterogeneity of managerial characteristics (Portaleoni et al., 2013). Importantly, for their research, Portaleoni et al. (2013) argue that there has been limited insight gained from previous investigations, to explain how corporate foresight occurs and affects strategic level decision-making in organisations. The authors highlight the need to implement foresight studies with a specific intent of creating evidence-based research relevant to management practice (Portaleoni et al., 2013), a view supported by an increasing number of researchers in the field (Amsteus,

2011b; Balaraman & Sundarraj, 2017; Hines et al., 2017; Rohrbeck et al., 2015; Tsoukas & Shepherd, 2004). Their response to this shortfall in the corporate foresight literature was to investigate four key questions:

1. What is the influence of managers on foresight processes?
2. How are corporate foresight processes manifested?
3. To what extent does the outer environment impact on corporate foresight?
4. What impact do corporate foresight results have on strategic decisions? (Portaleoni et al., 2013, p. 3)

The first two research questions are of particular interest given their potential focus on IF and managerial decision-making, and the phenomenon of foresight in organisations. The study sample included thirty managers from across four different functional levels of the organisation and three different departments. The authors found evidence of corporate foresight in the organisation, however, confirmed that this was manifested mainly in the top layers of management (Portaleoni et al., 2013) in both formal and informal ways, and within several different departments. As reflected in research question one, the study only sampled managers in the organisation, and as such, highlights an opportunity to explore the phenomenon of foresight at other levels within the organisation. Portaleoni et al. (2013) also explain that corporate foresight evident in higher levels of management is supported by the perception that top managers' tasks have increasingly strategic and longer-term characteristics than middle managers, thus resulting in the application of foresight practices at the top level of management with limited understanding at the middle or lower levels. This study highlighted the opportunity for qualitative research aimed at increasing understanding of IF in organisations. Despite its qualitative nature, the study was unable to articulate how organisational members apply foresight, or how foresight is experienced in the organisational setting, presenting opportunities for further research along these lines of inquiry.

2.3.6. Strategic foresight: A review

Several insights and future research opportunities stem from the strategic foresight literature. Many of these are captured by a recent review of strategic foresight literature. Rohrbeck et al. (2015) conducted a systematic literature review searching the terms *strategic foresight* and *corporate foresight*, which revealed 102 articles in Thomson's Web of Science between the years 2005 and 2014. Following their investigation, which included an

analysis of existing foresight definitions over time, the author's proposed a new definition of Corporate Foresight aimed at linking the conceptual processes involved in foresight, such as perception and interpretation, to the value creation for organisations (Rohrbeck et al., 2015). Their explanation of corporate foresight proposes that:

> *Corporate foresight permits an organization to lay the foundation for future competitive advantage. Corporate Foresight is identifying, observing, and interpreting factors that induce change, determining possible organization-specific implications, and triggering appropriate organizational responses. Corporate foresight involves multiple stakeholders and creates value through providing access to critical resources ahead of competition, preparing the organization for change, and permitting the organization to steer proactively towards a desired future (Rohrbeck et al., 2015, p. 2).*

Rohrbeck et al.'s (2015) explanation is comprehensive and captures the strategic role of foresight for firms seeking a competitive advantage. Importantly, the authors also embrace the emerging interest in the role of the individual in the foresight process by referring in their definition to *multiple stakeholders* and the interpretation required by these stakeholders. By building these individual elements into their strategic foresight definition, Rohrbeck et al. (2015) have welcomed opportunities to investigate and gain insight into the ability of these stakeholders – perhaps leaders, managers, or employees – to either develop or utilise IF ability to contribute to the strategic foresight process.

The development of strategic foresight literature has occurred mostly in isolation of other management literatures, with the concentration of research appearing in futures-oriented journals. As discussed earlier, a lack of collaboration across the disciplines of psychology and business to investigate the role of IF in organisations has resulted in a knowledge gap of understanding of IF. Rohrbeck et al. (2015) found a very weak link to debates in broader management journals with only three articles appearing in the journals investigated across the decade. Significantly, Rohrbeck et al. (2015) recommend two theoretical launching platforms for further research in the strategic foresight discipline which particularly imply a need to better understand IF in organisations.

First, the authors refer to managerial cognition and the role of individual and group cognition in the foresight process, highlighting the contribution of individual and group cognition to shaping perception and influencing decision-making (Rohrbeck et al., 2015).

This recommendation supports the view that cognitive capability of individuals is an important factor in organisations (Helfat & Peteraf, 2015); a view also supported by Hodgkinson and Clarke (2007), who identify the need to re-humanise strategy research to investigate *cognition in action*. Hodgkinson and Clarke (2007, p. 252) recommend a mixed methods approach to future research, in order to capture the thoughts of individuals' feelings and actions, so as to position them within 'a wider system of socio-political relationships that constitute the organization'. This argument for the need of a more humanistic approach focussing on the cognition of the individual in strategic practice supports the underlying aim of this research project; to deeply explore the experience of individuals with IF in organisations.

Second, Rohrbeck et al. (2015) discuss the importance of aligning sensemaking with strategic foresight research, arguing that corporate foresight research would benefit from further investigation and alignment with sensemaking. Weick (2005) describes sensemaking as 'the ongoing retrospective development of plausible images that rationalises what people are doing'. A key feature of sensemaking involves making meaning out of reality by *remembering* and *looking back* to establish meaning (Weick, 2001). Sensemaking shares this aspect of *remembering* with episodic foresight (Suddendorf & Corballis, 2007); a concept investigated in Section 2.3 below. It is possible that Rohrbeck et al.'s (2015) recommendation may stem from Weick's past criticism of strategic planning and forecasting as being misleading due to the disconnect of these processes with reflective action and history (Weick in Gephart, Topal, & Zhang, 2010). The sensemaking literature does acknowledge the value in looking forward, as evidenced by Gephart et al. (2010), who define 'future-oriented sensemaking…the conscious and intentional consideration of the probable future impact of certain actions…on the meaning construction processes' (Gioia in Gephart et al., 2010); and sensemaking appears to be closely aligned with individual experience and cognition in organisations. A greater understanding of the IF experience in organisations could provide insight into the potential association of sensemaking with foresight, however, it is not the intention of this study to investigate the formal sensemaking mechanisms evident in some organisational practices.

The strategic foresight literature highlighted a consistent gap in the knowledge of how individuals use IF ability or accomplish the conceptual tasks involved in the foresight

process. As established, achieving foresight competence potentially improves an organisation attaining a sustained competitive advantage (Major et al., 2001). However, to achieve this, it seems a firm needs to build the foresightfulness capability of their employees (Tsoukas & Shepherd, 2004). For HRM professionals to strategically undertake practices to build these capabilities there needs to be a better understanding of how individuals experience IF in organisations. Section 2.4 seeks to focus on the individual through establishing existing understanding of IF ability in both the organisational and psychology disciplines.

2.4. Individual foresight

IF is a human ability. As the previous review of strategic foresight has demonstrated, business literature identifies foresight as a valuable organisational capability / core competence (Coyne, Hall, & Clifford, 1997; Major et al., 2001; Rohrbeck et al., 2015), or process (Amanatidou & Guy, 2008; Cook et al., 2014; Georghiou & Keenan, 2006; Horton, 1999; Major & Cordey-Hayes, 2000; Voros, 2003) used in organisations to gain a competitive advantage. However, the review also highlighted many shortcomings in terms of how individuals in organisations participate in foresight behaviour. Debate continues at the individual level about whether foresight is a behaviour (Amsteus, 2012) or an ability (Ahuja, Coff, & Lee, 2005; Chia, 2004; Slaughter, 1997; Suddendorf & Corballis, 2007). As far back as 1949, Fayol (1949, p. 73) declared that 'the qualities and knowledge desirable for all higher managers [include]…embracing foresight, the ability to draw up and have drawn up the plan of action…'. Many researchers support Fayol's view of foresight as an ability, both theoretically and empirically (for example see Atance and O'Neill (2001); Balaraman and Sundarraj (2017); Suddendorf and Corballis (1997)). Thus, the focus of this section of the literature review seeks to position foresight as an ability, with consideration given to the behaviourist perspective.

IF involves the process of cognition and has been explored in the literature using many different terms. To define 'ability' is essential in understanding and positioning foresight at the individual level. Ferguson (1954), in his seminal paper exploring human ability, described ability operationally as the performance of an individual in a specific situation. This contingent view holds profound relevance for the discussion around IF. For example,

Ferguson (1954) argues that differences in human ability may be associated with a person's biological propensities, as well as any previous learning and the age at which that learning took place. In terms of foresight ability, research has established that the capacity to mentally access a past problem in order to make decisions to solve a future problem develops from around the age of four years (Atance et al., 2015; Atance & Sommerville, 2014; Boden et al., 2017; Suddendorf & Busby, 2005; Suddendorf & Corballis, 2007; Suddendorf et al., 2011). It has also been determined that all healthy adults have the ability to think back to previous experiences and utilise this remembering function to project themselves mentally into the future (Suddendorf, Addis, & Corballis, 2009; Tulving, 1985b; Wheeler, Stuss, & Tulving, 1997). The phenomenon of projecting oneself into the mental past (remembering) or future (imagining) is accorded the term *mental time travel*. Originating from the early work of Endel Tulving (Tulving, 1972) *mental time travel* is explored in terms of its contribution to foresight in section 2.4.2. However, prior to exploring the evolution of foresight ability from a psychology perspective, a review of IF ability focused on the individual in existing organisational literature serves as a starting point to establish the value of IF to organisations.

2.4.1.   IF ability within the organisational literature

2.4.1.2 IF ability and associated capabilities in organisations

Foresight has long been acknowledged as a necessary element of managerial ability. This is evidenced by Fayol's (1949) indelible definition of management which defines management as involving forecasting, planning, organising, commanding, coordinating, and controlling. Fayol (1949) explains that forecasting is to foresee in order to examine the future and draw up a plan of action. Whilst Fayol uses the terms forecast and foresee interchangeably in his discussion of managerial activities, Wack (in Ramirez and Wilkinson 2016) introduced the notion that mindfulness as intuition was significant in dealing with uncertainty. Futurist researchers (Amsteus, 2008; Balaraman & Sundarraj, 2017; Cuhls, 2003) have since argued that forecasting – i.e., seeing into the future, is only one component of foresight which also requires elements of networking and decision making concerning the future (Cuhls, 2003). This distinction is a reflection on the advances in research regarding strategic foresight and is an important distinction when attempting to explore IF ability in organisations. As discussed previously, Balaraman and Sundarraj (2017)

present a conceptual argument that capabilities provide an organisation with competitive advantage, arguing that foresight capability of a firm comprises IF capability combined with strategy formulation. They explored aspects of source and scope in information acquisition in a small study of six cases and found that both external and multiple sources of information in informal settings contribute to the development of foresight in higher level positions in India and West Asia (Balaraman & Sundarraj, 2017). Whilst this study was limited in its generalisability, it does indicate the new level of interest surrounding the role of individuals in the foresight process in organisations.

This view of individual capability was also raised by Turner and Crawford (1994) who explain the managerial competence of pathfinding. The authors describe pathfinding as the identification, crystallisation and articulation of new and achievable strategies for the firm (Turner & Crawford, 1994). Pathfinding requires members of the organisation: to be outward and future oriented; able to competently use systems and processes within the organisation; and to participate in such activities as discussion forums (Turner & Crawford, 1994), a description that Major et al. (2001) later proposed was identical to the process of foresight, but also acknowledged the role of individuals in the process. Placing the capabilities of individuals as central to a firm's success aligns with building foresight capacity of an organisation, which Hines et al. (2017) argue is achieved through building the foresight competency of professional futurists. Aligned with this, a literature stream on entrepreneurial foresight in organisations underscores the role of creativity and intuition in certain roles within organisations (Fisher and Neubert 2023; Fontela, Guzman, Perez and Santos 2006). The scope of this thesis prevents a rigorous examination of entrepreneurial foresight literature, however, outcomes from this study could be explored further in this context. Research focusing on the role of IF capability in the organisation reflects a growing interest in understanding the nature and importance of foresight ability at the individual level.

2.4.1.3 IF skills and behaviours and organisational performance

Foresight has been acknowledged as an individual skill or behaviour by a handful of management researchers in the futures literature. It is however, often promoted as a skill set within the higher levels of organisational decision-making. Chia (2004, p. 21), for example, proposes that 'Foresight is a unique and highly valued human capacity that is

widely recognized as a major source of wisdom, competitive advantage and cultural renewal within nations and corporations'. Whilst Chia (2004) positions foresight as a human ability, he implies the use of foresight for strategic or higher-level decision-making purposes. He further emphasises that leaders and visionaries who have the ability of foresight avoid future pitfalls through undertaking such activities as scenario planning or strategic decision-making (Chia, 2004). With a similar focus on upper-level managerial roles and strategic foresight, Amanatidou and Guy (2008) outline the benefits of managerial foresight as improved knowledge creation, diffusion and absorption, and social capital and networking; while Cornish (in O'Brien & Robertson, 2009) proposes that foresight leads to improved leadership decision-making in anticipating emerging opportunities and threats. This proposition that foresight is linked to firm success originated with Wack (in Ramirez and Wilkinson 2016, p. 69) who proposed that 'remarkable' people in organisations were entrepreneurial in their approach bringing 'new frames of references about emergent future possibilities'. This is supported by Amsteus (2011b) who empirically demonstrated that managerial foresight is correlated with organisational performance; confirming the potential competitive advantage gained by organisations accessing foresight capability through their employees. Amsteus appears to be the forerunner in establishing a measure for managerial foresight, suggesting the need to examine his measure further.

Establishing foresight as a behaviour, rather than an ability, facilitates its measurement in organisations. Amsteus (2008, p. 63) established a measure of managerial foresight by championing *individual managerial foresight* as a measurable concept based on two main aspects: *analysis* and *movement of analysis across time*. Unlike his counterparts who identify foresight as an ability (Atance & O'Neill, 2001; Suddendorf & Corballis, 2007), Amsteus (2008) argues that foresight is an individual-level behaviour, exhibited by managers in both overt and covert ways. He suggests six initial aspects of foresight behaviour comprising a managers' behaviour in perceiving, analysing, looking forward and backward in time, conducting information searches, evaluating consequences and implementing actions (Amsteus, 2008). These behaviours refer to several cognitive abilities such as perceiving, analysing and evaluating, and are closely aligned to the foresight process frameworks and consequent phase of *inputs* discussed in section 2.3.3 (Horton, 1999; Voros, 2003). This could indicate that although Amsteus (2012) has established a persuasive conceptual argument about the origin of foresight to determine the phenomenon as a behaviour; his

own definition of foresight describes a requirement of human cognitive *ability*; which supports the approach for this study.

Foresight requires the cognitive ability of analysis. Amsteus (2008) undertook a detailed synthesis to arrive at two aspects of *analysis* and *movement of analysis across time*. In developing his lengthy definition of foresight which, as discussed, includes emphasis on the *process* of analysing contingencies across past, present, and future time, he emphasises a managers' ability in analysing contingencies across a number of time points – which facilitates his intention of establishing foresight as a measurable managerial behaviour. He pursues this measurement through the development of a foresight instrument exploring three key dimensions:

1. **Present situation: *Why something is done*** (analysis of conditions that form the base for what to achieve as well as for what should be done, or what to do, to reach the sought achievements)
2. **Goal: *What to achieve*** (a desired future state)
3. **Plan: *What to do to achieve the previous*** (courses of action or a plan) (Amsteus, 2011a).

This behaviourist approach positions Amsteus' research as quantitative, thus fulfilling the author's aim to measure the cause and effect of foresight for managers and firms. Amsteus (2011b) established a relationship between managerial foresight and firm performance by indexing both a) managers' results on his developed foresight instrument and b) firm performance. He found a moderate but slightly significant relationship between managerial foresight and organisational performance (Amsteus, 2011b), which is an important contribution to establishing foresight as a valued core competence of organisations (Major et al., 2001). Whilst Amsteus positions foresight from a behaviourist viewpoint, as mentioned above, there are limitations in this approach. In the initial development of his model Amsteus chose to avoid what he terms the *sub-aspects* of foresight in order to arrive at his definition. By focussing on two aspects only of *analysis* and *movement of analysis across time*, Amsteus (2008, p. 58) allows only conceptual insight into other sub-aspects of analysis, such as 'perceiving, consequence evaluation, information search and implementation'. With the focus of much of this research on managerial cognitive abilities (or behaviour) on higher-level, strategic decision-making and impact, a gap in determining the role of foresight at the individual level in everyday jobs is identified. There is an opportunity to explore the nature of individual cognition in the IF process to understand its role and contribution to IF in everyday work.

2.4.1.4 Exploring IF ability with a qualitative approach in organisations

Examining the individual experience of foresight may provide greater insight into the analysis components of IF. Qualitative research could explore how and why managers consider past experience, if this information is useful and why, and how they consider information and personal experience in thinking about future scenarios. This approach could contribute to overcoming the non-humanistic approach to researching those involved with strategising in organisations as claimed by Hodgkinson and Clarke (2007). It may also reveal possible key elements of IF that have been overlooked in a more rationalist approach like Amsteus'. For example, a more advanced consideration of Amsteus' dimension of analysis may include a contextual analysis focused on the subjective experience of employees' environments in which foresight takes place to explore new or existing dimensionality, and potentially extend Amsteus' selection of certain aspects of IF (namely analysis and time) in his definition. In addition, future research could explore alternative reasoning for why individuals might sub-optimise decision-making when applying foresight in certain environments. For example, an individual might undermine their own foresight, which could be related to culture, humanist approaches and / or understandings of work culture and life. Tapinos and Pyper (2018) propose one way to begin to understand the humanistic aspects of analysis and interpretation involved in the foresight process – by examining foresight ability in the absence of formalised methods.

As established, IF in organisations, particularly as part of the strategic foresight process, often involves the analysis and interpretation of information utilising multiple methods. These methods can include expert panels, scenarios, brainstorming, Delphi, and environmental scanning (Popper, 2008). However, some argue that the research of those involved in strategising in organisations requires a more humanistic or qualitative approach in order to profile the cognitive characteristics of individuals partaking in the process (Hodgkinson & Clarke, 2007; Tapinos & Pyper, 2018). Tapinos and Pyper (2018) provide an extensive comparison of foresight process and theory in order to establish the need for further research examining IF activity in organisations. The authors conclude that existing literature on the foresight process focusses on organisational and corporate level foresight with research particularly targeted at organisational level processes and formalised methods such as those mentioned previously (Tapinos & Pyper, 2018). Their review of

foresight theory identifies an opportunity for research to explore IF further in organisations, with a focus on how individuals *do* foresight in the absence of formalised methods (Tapinos & Pyper, 2018). The qualitative nature of their research explores activities undertaken by analysts without the use of formalised methods. They proposed that by investigating forward-looking-analysis (FLA) as a foresight process utilised by analysts, they could explore how sensemaking takes place within this process (Tapinos & Pyper, 2018). The usefulness of sensemaking to this foresight study is explored next, however, it is worth noting here that the qualitative nature of Tapinos and Pyper's inductive case study, using interviews with professional analysts, provides rare insight, within organisational literature, into the cognitive decision-making processes of managers in organisations. Their findings are discussed below following an important foray into sensemaking literature. Focusing on elements of sensemaking may be extremely relevant to the study of foresight.

2.4.1.5 Sensemaking, temporality and IF ability in organisations

As Rohrbeck et al. (2015) recommended, strategic foresight could be more closely aligned with sensemaking in organisations, to improve our understanding of the relationship between individuals and perception. Sensemaking refers to the 'process by which people construct, interpret, and recognize meaningful features of the world' (Gephart et al., 2010, p. 275). Recently, Sandberg and Tsoukas (2020) proposed a typology of sensemaking that is useful in positioning the focus of IF in this study. Particularly, the authors define four types of sensemaking: immanent, involved-deliberate, detached-deliberate, and representational (Sandberg & Tsoukas, 2020). Immanent and involved-deliberate sensemaking types refer to the type of sensemaking utilised in employee's everyday work tasks, with immanent sensemaking being the simplest form of sensemaking involving "agents' skilful enactment and performance of routine organizational activities" (Sandberg & Tsoukas, 2020, pp. 8-10). Involved-deliberate sensemaking is similar, yet occurs when routine activities are interrupted – requiring the employee to pay 'deliberate attention' to their activities with the purpose of restoring order to their work (Sandberg & Tsoukas, 2020, p. 11). Several aspects of the authors' ontological foundation establish the different qualities for the sensemaking types (e.g., being-in-the-world, temporality, embodiment, and language). Of specific interest to this IF study, and drawing on the work of Heidegger (in Sandberg & Tsoukas, 2020), is the temporal differences of people's engagement in their world "constituted…in and through

practical, chronological or existential time" (Sandberg & Tsoukas, 2020, p. 6). Summarising this sensemaking literature in such a limited space as this chapter is challenging, however, it is important to this study to explore at least the temporal aspect of sensemaking outlined above.

Consideration of temporality is critical to this study in terms of its intended focus on foresight utilised in everyday work of employees. The strategic foresight literature highlighted the longer-term strategic 'planning' nature of foresight – defined in terms of temporality for sensemaking by Sandberg and Tsoukas (2020, p. 9) as "analytically chronological" – referring to time as embodying past, present and future; exemplified through strategic planning meetings that might draw on past and current performance to strategise about future performance. In contrast, and more relevant to this study, are the temporal features of "practical (immediate anticipatory)" or "pragmatically chronological" time, which are reflective in nature of the time focus for work undertaken routinely (i.e., practical and immediate or anticipatory in nature), yet sometimes interrupted by unexpected are intended distractions (i.e., requiring the employee to direct their time and attention chronologically toward resolving the issue at hand) (Sandberg & Tsoukas, 2020, pp. 9-12). While these typology features are presented here with an over-simplified explanation, it is hoped their inclusion supports the direction of this study in focusing the research on foresight activities and experiences undertaken by workers during their normal working day. Returning to the futures literature, sensemaking was useful for analysts involved in the qualitative study undertaken by Tapinos and Pyper (2018).

Interpretation and analysis are important aspects of IF, although they are not yet well understood. Tapinos and Pyper (2018) argue that their research confirms the process of interpretation and understanding required in the foresight process, which is also evident in other studies (see for example Amsteus (2008), Sarpong and Hartman (2018), Slaughter (1995)). In terms of IF, their study identifies that analysts, when undertaking foresight without the use of formalised methods, develop a system of relationships to interpret information (Tapinos & Pyper, 2018). The analysts tended to cluster factors together in order to understand uncertainty, through identifying forces that influence it, as well as how it is linked to other important aspects needed in the process of decision-making (Tapinos & Pyper, 2018). This process of analysis during foresight can be associated with the

phenomenon of sensemaking through the observation that analysts identified a system of relationships (Tapinos & Pyper, 2018), similar to the mental models or schemas that are anticipated to be evident through further exploration of IF in organisations.

Mental models and schemas are often associated with sensemaking and learning organisation theory; however, it is also plausible that they contribute to the process of IF. Mental models, or the images, hypotheses, and histories that individuals hold in their minds regarding their own identity, others around them, the institutions in which they work, and each aspect of the world in which they live (Senge, 1994); are key components of a learning organisation (Fillion, Koffi, & Ekionea, 2015). Often mental models of individuals are tacit in nature (Nonaka, 1994), which Senge (1992) argues is counterproductive when an organisation is seeking to change existing mental models. If the mental models remain unknown, they remain unexamined, and if they remain unexamined, they remain unchanged (Senge, 1992). It seems likely that mental models are implicated with IF, particularly given the nature of cognitive or mental processing involved in the foresight process. Tapinos and Pyper (2018) observed that analysts seeking to create foresight for the future, challenge their initial mental model, and through undertaking the process of foresight, arrive at a 'new mental model' (Tapinos & Pyper, 2018, p. 299). Importantly, their study found that analysts relied on two factors that contributed to their understanding of the dimensions included in their mental models. First, their background and education; and second, the sources they draw on that provide information to update their mental models. Therefore, the quality of foresight produced by analysts is dependent on the capabilities of the analyst to create systems of relationships, as well as their access to information (Tapinos & Pyper, 2018). These influencing factors of the individual in the foresight process highlight the individual's identity construction, which could interact with the IF process.

Identity construction is one of the distinguishing features of sensemaking. Weick et al. (2005, p. 416) argue from a sensemaking perspective, 'who we think we are (identity) as organisational actors shapes what we enact and how we interpret, which affects what outsiders think we are (image) and how they treat us, which stabilizes or destabilizes our identity'. The nature of identity construction is reflected in the sensemaking research of Sandberg and Tsoukas (2020, p. 5) who propose that "being-in-the-world", or in the 'practice world' is one of the four key sensemaking ontological categories important in

determining the difference nature of sensemaking in organisations. One of the key points here, as it potentially relates to foresight, is that organisational actors, or employees, when interpreting information, are potentially influenced by many factors including their own identity and the identity they hold with the organisation – or their practice world. With regard to mental models and Senge's view regarding the potentially restrictive tacit nature of mental models, this would infer that bringing one's mental models to the fore when interpreting information during the foresight process, and in their practice world, is essential if the outputs from this process are to be valued and translated into *theories-in-use* (the theories that underlie our actions) as opposed to *espoused theories* (what we say) (Senge, 1992). The challenge will be understanding how employees experience this process of foresight, and potential tacit-knowledge sharing, when engaging with IF in their practice world.

Understanding IF may require further investigation of the cognitive processes associated with foresight. Tapinos and Pyper's (2018) study has significantly contributed to the investigation of IF; however, there were some methodology limitations that could be explored with further qualitative research. Tapinos and Pyper's (2018) research was conducted in an organisation where foresight is not only an expected behaviour but is actually a required specialisation (i.e., Forward Looking Analysis), which positions foresight in a socially constructed manner. The authors agree that future research could be developed to enhance understanding of the role and emergence of mental models within IF; particularly for employees not engaging professionally with the discipline of future strategising. To begin to understand the cognitive processes and mental models associated with IF it is a logical next step to examine cognitive psychology literature related to the phenomenon.

2.4.2. IF ability within the cognitive psychology literature

2.4.2.1. <u>Early foresight distinctions in cognitive research</u>

Early exploration of the phenomenon of foresight in cognitive literature began in the 1980s. Research focused on the ability of humans to imagine future scenarios by drawing on past experiences, planning future actions, and assessing these actions to determine future success, is increasingly prominent in cognitive psychology literature over the past three

decades (Atance & O'Neill, 2001; Schacter et al., 2007; Schacter et al., 2017; Suddendorf, 2017; Suddendorf & Corballis, 1997; Szpunar, Spreng, & Schacter, 2014; Tulving, 1985a). Much of this research stemmed from Tulving's (1985a) seminal work *Elements of Episodic Memory*, which declared two types of memory systems, episodic and semantic are involved in the process of remembering and imagining. Over the last thirty years, these two memory systems, as well as various types of human consciousness associated with remembering and imagining, have been debated and researched with the aim of developing a cognitive model to explain humans' ability to mentally relive past experiences (remember) and develop future scenarios (imagine) (Ingvar, 1985; Rajaram, 1993; Sherry & Schacter, 1987; Suddendorf & Corballis, 1997; Szpunar et al., 2014; Tulving, 1985b; Wheeler et al., 1997). This research provides crucial insights into understanding IF ability. Further definitions of semantic and episodic memory types as well as consciousness types are explored below; however, providing the context in which these memory systems are positioned first, is helpful to assist overall understanding of the learning journey associated with future thinking in humans.

The value of understanding humans' propensity to think about future events and their consequences was evident in the social psychology research of Strathman, Gleicher, Boninger, and Edwards (1994) in the early 1990s. Strathman et al. (1994, p. 742) proposed a construct of 'Consideration of Future Consequences' (CFC), and developed an instrument of the same name to measure individual differences in the extent to which people think about distant versus immediate consequences of their behaviour. The authors argue that the measure of an individual's *future orientation* (high or low) influences their behaviour choices (Strathman et al., 1994). Considered a valid and reliable measure (Atance & O'Neill, 2001; Joireman, Balliet, Sprott, Spangenberg, & Schultz, 2008; Scheier & Carver, 1985), the CFC is a 12-item instrument, which establishes the high or low future orientation of individuals. Individuals who score low in CFC tend to be more focused on immediate needs and behavioural outcomes and therefore act to fulfil these needs immediately, as opposed to those high in CFC who tend to consider distant goals and future outcomes when considering their immediate actions (Strathman et al., 1994).

Scores on the CFC have shown individual differences in areas such as health (e.g., cigarettes smoked in one week) and environmentally conscious behaviour (Atance & O'Neil,

2001) but also differences in organisational settings. It should be noted that the CFC is oriented toward a western business culture. The CFC construct has been established as impacting the way in which employees focus on quality over quantity in their work – where individuals with low CFC scores produced higher volumes of work with less focus on quality as opposed to their high-CFC counterparts (Graso & Probst, 2012). In addition, employees have demonstrated greater motivation about safety-related behaviours when they score high on the CFC Scale compared to those with lower CFC scores (Probst, Graso, Estrada, & Greer, 2013). These outcomes highlight the potential benefits to organisations of future-thinking employees. Another development specific to strategic foresight research, is the recent development of the Futures Consciousness (FC) scale by Ahvenharju, Lalot, Minkkinen, and Quiamzade (2021). Targeted at organisations and individuals involved in futures research, the *Future Consciousness* (FC) Scale seeks to establish the psychological capacity of individuals to 'understand, anticipate, prepare for and embrace the future' (Ahvenharju et al., 2021, p. 2). Although the FC scale is not targeted at identifying general employee-level IF, through its application it does demonstrate the value of understanding employee's propensity to think about the future. This propensity has also been identified in the literature as temporal focus.

Temporal focus or "the extent to which people characteristically devote their attention to perceptions of the past, present, and future" (Bluedorn in Shipp, Edwards, & Lambert, 2009, p. 1) has been established as an important individual difference in organisational settings. Shipp et al. (2009) highlight the extensive research undertaken to demonstrate the effect of people's tendency to focus on the past, present, or future, and how their propensity to pay attention to one or more of these temporal experiences can influence such activities as goal setting, motivation, and performance – to name a few. It is proposed, therefore, with foresight's emphasis on future-thinking and outcomes, that temporal focus may be an important determinant when considering employee decision-making, foresight experience or foresight ability in organisations. Conway (2022) argues that temporal focus awareness is an essential element for those partaking in a foresight process. An employee's future orientation could determine their choice in pursuing certain actions over others – given a certain situation – and depending on their propensity to be concerned about the consequences of their, or their organisation's actions. For this reason, utilising a tool such as the CFC of FC Scale in congruence with qualitative exploratory research, could

help determine employees' IF ability. From the propensity for humans to focus attention on the past, present, or future – to humans' ability to travel in their mind to the past or future – this review will now explore the phenomenon of *mental time travel* in the literature, and its significance for IF ability.

2.4.2.2. Mental Time Travel

The Mental Time Travel (MTT) framework provides a foundation for much of the cognitive research into IF. MTT describes humans' ability to mentally reconstruct personal events from the past (drawing on episodic memory) and mentally construct possible events in the future (Suddendorf & Corballis, 1997), a process which, as discussed earlier, aligns with the process of sensemaking. By drawing on employees' ability to *remember* and then *imagine* themselves in a future scenario and applying this to 'forecasting' practices associated with sensemaking, the criticism by Weick (in Gephart et al., 2010) that forecasting fails to connect with reflective action and history may be overcome. Suddendorf and Corballis' (1997) framework of MTT draws on Tulving's episodic and semantic memory systems to argue that humans have the cognitive ability to mentally project themselves backward (remembering) and forward (imagining) in time. To understand the different memory systems and consciousness types involved in MTT we need to distinguish between episodic and semantic memory and identify the role of consciousness in facilitating the act of remembering. Episodic and semantic memory play an important role in understanding the operationalisation of MTT. Wheeler et al. (1997) explains that the episodic memory system mediates MTT because it facilitates the recollection of personal happenings and events from a person's past, as well as the mental projection of future events into a person's future. Understanding the episodic and semantic memory systems and their function is essential in understanding foresight ability in humans.

Episodic memory is one of two memory systems involved in MTT. Tulving (2001) explains episodic memory as a past-oriented memory system that enables humans to re-experience our memories. Put simply, episodic memory '…allows us to remember personally experienced events, and to travel backwards in time to re-experience those events' (Atance & O'Neill, 2001, p. 533). However, episodic memory is not the only memory system involved in the process of foresight; it is dependent on semantic memory to remember and then imagine future scenarios (Tulving, 2001). Semantic memory is defined as our 'general

knowledge about the world, of the sort that is normally common to people of a given culture…' (Suddendorf & Corballis, 1997). This dependence of episodic memory on semantic memory is a newer development in Tulving's explanation of episodic memory, and importantly, reflects the findings and conceptualisations of many of Tulving's peers (Cheng, Werning, & Suddendorf, 2016; Craver, Kwan, Steindam, & Rosenbaum, 2014; Klein, 2013). Current discussion on this issue demands that future foresight research consider both episodic and semantic memory. Table 2.3 provides Tulving's definitions of the semantic and episodic memory systems and seeks to clarify the distinction of these memory systems through applying a simple example.

Table 2.3 Episodic versus Semantic Memory explained

Scenario: recalling past memories of self and visit to London
Semantic Memory (*Information Source:* Comprehension – from facts, ideas, concepts)
Semantic memory '…is the memory [system] necessary for the use of language. It is a mental thesaurus, organized knowledge a person possesses about words and other verbal symbols, their meaning and referents, about relations among them, and about rules, formulas, and algorithms for the manipulation of the symbols, concepts, and relations' (Tulving, 1984, p. 223)
Semantic memory example: *Knowing* the names of iconic buildings such as the London Tower and having 'knowledge' about the Crown Jewel's being on exhibit there.
Episodic Memory (*Information Source:* Sensation – from personal events or episodes)
Episodic memory is a '…past-oriented memory system [that] allows re-experiencing [of experiences] through autonoetic awareness' (Tulving, 2001, p. 20)
Episodic memory example: *Remembering* a specific episode or experience, for example, the experience of waiting in the rain for two hours in a queue to tour the London Tower.

Source: Developed by the author

The definition for episodic memory above includes a reference to *autonoetic awareness*. Autonoetic awareness (or *self-knowing*) refers to the type of consciousness that enables humans to be aware of their own thinking, or as Tulving (1985b) explains 'that mediates an individual's awareness of his or her existence and identity in subjective time extending from the personal past through the present to the personal future' (Tulving, 1985b, p. 1). Comparing the episodic memory system with that of tacit knowledge discussed in organisational literature (see Ganguly et al. (2019), Eisenhardt and Santos (2002), and Smith (2001)) may provide greater insights into the foresight process. It is possible to argue

episodic memories are tacit in nature, that is, they are linked to the individual and are very difficult and sometimes impossible to articulate (Eisenhardt & Santos, 2002; Nonaka, 1994).

This supports the earlier discussions about the tacit nature of knowledge utilised in IF. As discussed, Sternberg (1991 in Smith, 2001) explains that cognitive tacit knowledge involves implicit mental models and perceptions, elements identified in section 2.3.3. as part of the foresight process. Therefore, IF arguably involves cognitive tacit knowledge as a result of drawing on episodic memory to recollect past personal experience as part of the process of mentally travelling into the future. Therefore, understanding how individuals who engage in IF behaviour share 'tacit' insights with others, particularly when outcomes could affect multiple organisational stakeholders, would be critical knowledge for the firm. Nonaka's (1994) Modes of Knowledge Creation (see Figure 2.2) demonstrate the opportunities for sharing potentially-tacit IF knowledge in organisations. Gaining an understanding of how individuals experience IF and how they interact as part of this process will enable HR practitioners to gain better insight into how to maximise the benefits of IF knowledge creation in organisations. For example, if IF knowledge is deemed tacit in nature, yet beneficial to other stakeholders in the organisation, activities associated with socialisation such as on-the-job training (OJT) or mentoring should be prioritised given these activities successfully facilitate the transfer of knowledge between workers (Al-Zoubi, Masa'deh, & Twaissi, 2022; Farnese, Barbieri, Chirumbolo, & Patriotta, 2019; Nonaka, 1994). If this knowledge was then deemed important to the wider organisation, internationalisation, such as organisational learning strategies, would need to be prioritised and so forth (Nonaka, 1994).

Figure 2.2   Nonaka's Modes of Knowledge Creation

	Tacit knowledge *to*	Explicit knowledge
Tacit knowledge *from*	Socialisation *(OJT Training or mentoring)*	Externalisation *(use of metaphors)*
Explicit knowledge	Internalisation *(organisation learning)*	Combination *(meetings, phone conversations)*

Source: Adapted from Nonaka (1994, p. 19)

The phenomenon of how individuals *know* that they know something – in terms of drawing on their past experiences when in a new situation – relies on a complex system of cognition and consciousness. This process is relevant for understanding IF given the importance of past experience to the phenomenon but may also have implications in terms of brain capacity for these functions. The following sections therefore investigates this process further.

2.4.2.3.   Metacognition and autonoetic consciousness

Episodic and semantic memory systems alone do not facilitate the process of foresight. Tulving's work describes where the knowledge for remembering and imagining originates, however, if we re-visit the generic description of foresight – 'the ability of humans to predict what may happen in the future' (Oxford University Press, 2018), it is necessary to understand the role of consciousness in the remembering process to explain human ability to predict future events by drawing on these memory systems. Tulving's speculations on memory and consciousness provide strong support, evidenced by empirical observations (Tulving, 1985b; Wheeler et al., 1997), that link episodic memory to autonoetic consciousness (i.e., self-knowing). Nelson and Narens (1994) explain that through gaining knowledge about the memory systems that we associate with the brain (termed metacognition), research progress can be made in the area of *metamemory, that is,* 'knowledge about one's memory capabilities and strategies that can aid memory, as well as the processes involved in memory self-monitoring' (Pannu & Kaszniak, 2005, p. 105). This is important to the current study for two reasons. First, understanding memory capabilities and strategies offers a better understanding of how the memory systems involved in future thinking are linked to our ability to recall personal experiences – an important aspect of future thinking. Second, the study of metamemory enables insights into potential advantages or challenges that individuals may face in their capacity for foresight due to age (Addis et al., 2008; Lyons et al., 2014; Steinberg et al., 2009) or neural disorders such as Autism Spectrum Disorder (Murphy et al., 2017) or Alzheimer's Disease (Schacter et al., 2017). To understand how individuals project themselves into the future when drawing on their episodic and semantic memory systems as part of the foresight process, requires further exploration of the role of consciousness in this process.

Different types of consciousness or states of awareness facilitate our ability to draw on memory. As mentioned previously, autonoetic or *self-knowing* consciousness plays an important role in mediating an individual's awareness of their existence and identity across time (from personal past to personal future) (Tulving, 1985b, p. 1). Wheeler et al. (1997, p. 335) explain that autonoetic consciousness facilitates the capacity for individuals to project 'their own existence into the future, and to reflect about what [their own] experiences might be like at a later time'. This type of consciousness is what enables humans to take part in the act of remembering. Remembering plays an important role in humans' ability to recall personal experiences, and then call on this personal experience to consider the consequences of their future actions. This could be an essential aspect when considering foresight ability; and is congruent with the recommendation made by Rohrbeck et al. (2015) to consider the role of sensemaking in the foresight process. As discussed previously, sensemaking involves making meaning out of reality by *remembering* and *looking back* to establish meaning (Weick, 2001); which Weick (in Gephart et al., 2010) has previously criticised as a shortfall in the foresight process described by futures researchers.

To establish the phenomena of future thinking more clearly, Table 2.4. shows different types of consciousness and their relationship to different memory systems identified by Tulving (1985b); episodic, semantic and procedural memory. Episodic memory and autonoetic consciousness are highlighted to emphasise their importance in foresight function.

Table 2.4 Pairing of memory and consciousness types

Memory Systems	Consciousness Type
Episodic Memory 'mediates the *remembering* of personally experienced events.'	**Autonoetic Consciousness (self-knowing)** '…is necessary for the remembering of personally experienced events. When a person remembers such an event, he [sic] is aware of the event as a veridical part of his own past existence… autonoetic consciousness confers the special phenomenal flavour to the remembering of past events, the flavour that distinguishes remembering from other kinds of awareness, such as those characterizing perceiving, thinking, imagining, or dreaming.'
Semantic Memory '…the symbolically representable knowledge that organisms possess about the world'	**Noetic Consciousness (knowing)** '…allows an organism to be aware of, and to cognitively operate on, objects and events, and relations among objects and events, in the absence of these objects and events'
Procedural Memory '…concerned with how things are done – with the acquisition, retention, and utilization of perceptual, cognitive, and motor skills.'	**Anoetic Consciousness (non-knowing)** '…is temporally and spatially bound to the current situation.'

Source: Adapted from Tulving (1985b, p. 3)

The role of autonoetic consciousness (i.e., having an awareness of the self in this process) in MTT becomes apparent with further reflection. Wheeler et al. (1997, p. 331) describes MTT as an individual's ability to 'relive experiences by thinking back to previous situations and happenings in the past and to mentally project oneself into the anticipated future through imagination, daydreams, and fantasies'. This process involves a level of self-knowing, as described by Tulving in Table 2.4.

A final observation of MTT is that it is a phenomenon found in humans, that is, as yet unsubstantiated in the animal kingdom. Suddendorf and Corballis (1997) place great importance on MTT's uniqueness to the human species, arguing it has enabled humans to adapt to changing environments beyond the ability of any other species. This could be an essential component of employees operating in fast-changing organisational environments (Peter & Jarratt, 2015; Rohrbeck et al., 2015). However, the uniqueness of MTT to humans

is a contentious issue and continues to be challenged and debated in the literature (Clayton, Bussey, & Dickinson, 2003; Clayton & Dickinson, 1998; Osvath & Osvath, 2008; Suddendorf & Busby, 2003). This debate will continue in the cognitive psychology arena, however, does not detract from the usefulness of the underlying theory of MTT in understanding IF. MTT was one of the earlier forerunners into the foray of future thinking; however, the concept of Episodic Future Thinking, coined by Atance and O'Neill (2001), provided a launching platform for many other cognitive researchers interested in the phenomenon of foresight.

2.4.2.4. Episodic Future Thinking

A turning point in the literature on future thinking and foresight is Atance and O'Neill's (2001) introduction of the concept Episodic Future Thinking (EFT); referring to one's 'ability to project the self forward in time to pre-experience an event' (p. 537). Like Suddendorf and Corballis (1997), Atance and O'Neill (2001) developed EFT in response to Tulving's (1985a) seminal work about episodic memory. Atance and O'Neill's (2001) conceptual paper on EFT laid the foundations for research into the cognitive ability of humans to think into the future and consider the impact of their actions; building on the earlier foundations of the Consideration of Future Consequences (CFC) measure discussed previously (Strathman et al., 1994). The authors positioned EFT as an organising construct and outlined several future research opportunities in the cognitive, social and personality, clinical, neuro and developmental fields of psychology (Atance & O'Neill, 2001); which have since been embraced by researchers in these fields.

The defining of EFT presents a number of implications for foresight in organisations. Atance and O'Neill (2001) highlight the potential for EFT to assist in understanding the planning stage in prospective memory. Kliegel et al. (2000, p. 1041) define prospective memory as 'memory for activities to be performed in the future'. Put simply, prospective memory is our ability to recall a task that we intend on doing in the future – when the future arrives, for example, remembering to give a friend a message from a colleague we spoke to last week. Prospection, or thinking about the future, has recently re-emerged as a term in the literature, with an emphasis on its importance in human survival and reproduction (Suddendorf et al., 2018). However, similar thinking could be applied to organisations and employee's jobs to utilise prospection in identifying potential threats and opportunities and overcome adversities during the conceptual or *input* phase of foresight. Kliegel et al. (2000)

discusses the use of prospective memory in more complex situations like the planning of day-to-day activities or air traffic flow during peak air traffic times (for example) that require several delayed actions in a given time period. They determine three stages of planning in the prospective memory process: making a plan, remembering the plan and remembering to execute the plan sometime in the future (Kliegel et al., 2000). Understanding the cognitive processes involved in EFT in employees may facilitate better planning during the initial stages of prospection.

EFT requires individuals to see future details from their own perspective, which may influence decision-making and prediction outcomes. It is argued that prediction accuracy may increase when individuals are motivated to pre-experience details of a future plan of events from their perspective (Atance & O'Neill, 2001). Atance and O'Neill (2001) also speculate that the proximity of an event may be related to engagement levels in EFT given previous evidence that people planning for events tend toward greater attention to timing and detail when the event is in the near future (Liberman and Trope in Atance & O'Neill, 2001). One of the distinguishing features when considering the role of MTT or EFT in defining IF, is the focus on the individual. Atance and O'Neill's (2001) original definition of EFT 'to project the *self* forward in time' implies an ability of humans to position themselves in this process, as opposed to the broader organisational view of strategic foresight. Exploring the individuals' experience of foresight in organisations may facilitate a better understanding of the role of individual perspective in the foresight process. It may also explain how this individual perspective, and individual mental models, interact with foresight decision-making and prediction.

Another potential application of the EFT model involves goal attainment. Atance and O'Neill (2001) argue the potential mediation role of EFT in the process of *envisaging* during goal setting leading to higher goal attainment. Setting challenging goals has long been associated with significant increases in employee productivity (Locke & Latham, 2002; Locke & Latham, 2019). Goal-setting theory advocates that employees are more motivated to achieve performance targets that are specific, agreed and challenging (Nankervis, Baird, Coffey, & Shields, 2014). EFT, with its self-projection component, may encourage individuals to picture themselves in situations of goal attainment, thus developing more realistic and challenging goals during the goal-setting stage. It would be useful to explore whether the

process of IF in organisations encourages employees to set more realistic and challenging goals which could contribute to SHRM practices embracing IF ability to target performance management. With multiple definitions and terms for foresight now existing in the cognitive psychology literature researchers realised there was a need to attempt a unified approach to guide further progress in the field (Suddendorf & Moore, 2011).

2.4.2.5.   Episodic Foresight – a way forward for IF ability

A special issue of *Cognitive Development* entitled 'The development of episodic foresight' (Suddendorf & Moore, 2011) successfully argues for the culmination of research terms in the psychology literature that refer to future thinking. Terms such as *mental time travel into the future* (Suddendorf & Corballis, 1997), *episodic future thinking* (Atance & O'Neill, 2001), and *episodic simulation of future events* (Schacter et al., 2007) were argued to be too wordy and awkward; and in an attempt to unite the field, a proposed label of *Episodic Foresight* was proposed. Consequently, the term episodic foresight has been defined as 'the ability to imagine diverse future situations and organize current actions accordingly' (Suddendorf et al., 2018). Evidence of literature published after the release of this special issue suggests that on the whole, the term episodic foresight has been adopted by researchers interested in this phenomenon.

The proliferation of research examining episodic foresight over the last decade has been encouraging in terms of progress made in the field. A search of *Episodic Foresight* in the *Scopus* database (as of 31 January 2023) revealed 94 articles published in the span of 12 years. The momentum in this field reflects the interest in the phenomenon of foresight, however, the majority of publications are naturally positioned in the field of psychology, with medicine, neuroscience, biochemistry, genetics and molecular biology, and arts and humanities following suit. Of concern is the observation that only *one* article embracing episodic foresight and its potential use in understanding organisational behaviour, was published in a business-related journal, "*Exploring the links between neuroscience and foresight*" (Conway, 2022) in the *Journal of Futures Studies.* Conway (2022) presents a conceptual argument for the value of researching episodic foresight and its potential contribution to corporate foresight and futures work. She proposes that brain functions (episodic foresight, creativity, and emotion), along with openness to experience (curious, challenging, unconventional) and temporal preferences (past, present, future) play a vital

role in generating images of the future that contribute to Futures Studies and Foresight (FSF). Whilst this framework is conceptual only, it has paved the way for researchers to now begin further investigations to explore the many contributory factors of the foresight process – particularly in futures studies.

Further, the research highlights the vulnerability of humans contributing to the foresight process in organisations. As Rhemann (2019) argues, foresight ability, with its dependence on memories (relied on for scenario planning), can be jeopardised because these memories can be overwritten; laying potential for oversights when participating in futures work related to disaster planning or public safety. This limitation, along with new developments with cross-disciplinary approaches, highlights an opportunity to better understand the way in which workers utilise brain functions, along with other important foresight-related activities, to facilitate foresight in certain situations. If we are to capture the valuable insights that psychology researchers have provided, and apply them in an organisational context, we need to investigate how foresight activity has been embraced in organisational settings to date. Conway (2022) and Rhemann's (2019) research still positions foresight ability within the futures literature. This study, in similar vein to Balaraman and Sundarraj (2017) (although their research is also positioned in the futures arena), hopes to extend the value of foresight research to "employee-level ideas, actions, characteristics, skills and capabilities" (p. 982). In addition, and as noted previously, this research could also be relevant to the area of entrepreneurial foresight.

Understanding IF could assist in directing efforts towards improving foresight ability and its outcomes for organisations. Reflecting on the possible applications of episodic foresight in everyday work life, it seems there are many opportunities for future research, from planning every-day activities, partaking in valued and meaningful goal-setting and improving prediction and decision-making outcomes. Atance and O'Neill (2001), similar to (Suddendorf & Corballis, 2007) with their concept of MTT, proclaim that EFT could be a defining feature of the human species, making it a crucial phenomenon to explore and further understand human experience and behaviour. In essence, this philosophy could be applied to organisations, presenting an opportunity to explore and understand IF in the pursuit of improving employee work and organisational outcomes. Based on the many

contributions to foresight's definition in the literature, this study views the individual essence of the phenomenon of foresight as:

> *"…the ability of humans to imagine future scenarios by drawing on past experiences, planning future actions, and assessing these actions to determine future success"*
>
> *(compare Atance & O'Neill, 2001; Schacter et al., 2007; Schacter et al., 2017; Suddendorf, 2017; Suddendorf & Corballis, 1997; Szpunar et al., 2014; Tulving, 1985a)*

2.5. Final outcomes of literature review and justification for this research

Limited research investigating IF ability at the employee-level in organisations has prompted a multi-disciplinary approach to the literature review to develop an integrative theoretical framework to be presented at the end of this chapter. The value of understanding IF in organisations is driven, first, by the established value of strategic foresight practices to organisations (Major et al., 2001; Rohrbeck & Schwarz, 2013). Although the strategic foresight literature highlights the need to understand how foresight is established and experienced at the individual-level (Hodgkinson & Clarke, 2007; Tapinos & Pyper, 2018), organisations continue to benefit from strategic foresight endeavours. Teece (2007), and Hodgkinson and Healy's (2011) work highlights the importance of understanding the role of IF in contributing to strategic foresight in organisations. Therefore, opportunities exist to contribute to process models of strategic foresight (Horton, 1999; Voros, 2003), where individual cognitive abilities could be further defined and understood.

Second, there is a call for sensemaking to be more closely integrated with foresight practice in organisations (Rohrbeck et al., 2015). The nature of sensemaking, in requiring the employee to reflect on past practice to establish meaning in their current world (Weick, 2001), has been determined as valuable to the strategic foresight process (Tapinos & Pyper, 2018). Exploring how individuals experience foresight through drawing on past experience may provide valuable insights into similar processes identified in the sensemaking literature. These insights could guide future research efforts focused on the integration of sensemaking and foresight practice.

Third, the ability for employees to engage in future-thinking and consider the future consequences of their decisions and actions has been established as contributing to positive behavioural outcomes in employees (Graso & Probst, 2012; Probst et al., 2013). Through exploring how employees undertake foresight and seeking to understand when and/or how they think about the future when operating in their current jobs, insights could be gained to contribute to effective HRM strategies that target the benefits of IF. For example, exploring how employees partake in future MTT (imagining) and their experience of work outcomes related to this phenomenon, could encourage HR practitioners to focus on developing these skills in others. Importantly, future-oriented thinking has been shown to influence safety citizenship behaviours of employees (Probst et al., 2013), which reinforce the importance of exploring the role of IF in the everyday work of individual employees in organisations.

Fourth, several characteristics that contribute to the IF process emerged from both the organisational and psychology foresight literature. The literature points to phenomena such as openness to experiences and temporal preference (Conway, 2022), future-thinking utilising visualisation and consideration of future consequences (Atance & O'Neill, 2001; Strathman et al., 1994), and an ability to draw on past experiences utilising memory systems and consciousness to imagine alternative future scenarios (Suddendorf, 2017). Despite work to date that establishes these features as important to IF, there is yet to be a study that explores how individuals in organisations draw on these characteristics when utilising IF. In addition, and in relation to the phenomenon of sensemaking, understanding the potential impact of employees' current world when experiencing IF will be of benefit in establishing the contextual factors that may influence the experience of IF. For example, do all employees with IF ability utilise their foresight at work? If not, why not? If IF requires employees to draw on past experience, does tenure of employees influence their IF experience? Are there other cultural factors that may or may not encourage IF in organisations? For example, perhaps leadership or supervisory style may impact the propensity for employees to utilise IF. Insights gained from researching and understanding IF in organisational settings could be utilised by HRM practitioners to establish practices and policies that help identify, develop, and foster IF ability to support job and organisational outcomes. This opportunity highlights the significance of the final motivation for this study.

Given the often-tacit nature of personal knowledge involved in the IF process, along with the inherent expected outcomes of knowledge creation from the strategic foresight process, establishing effective KM practices to harness the potential of foresight knowledge in firms should be a priority for HRM practitioners. As expressed by Bootz, Durance, and Monti (2019, p. 81) in a special edition of *Technological Forecasting and Social Change* dedicated to understanding the impact of foresight on knowledge management, "individual and collective cognition has now become one of the four major themes of the discipline [of foresight]". This study seeks to contribute to the micro-level understanding of factors associated with IF. Underpinned by the resource-based view (RBV) of the firm, the KBV proposes that knowledge is the most strategically significant resource of the organisation (Grant, 1996; Haesli & Boxall, 2005; Wright et al., 2001). Wright et al. (2001) support the need to explore micro-level foundations of capabilities through their argument that the RBV extends beyond strategic management theory; and enables concepts such as knowledge, dynamic capability, learning organisations and leadership to be considered from a more SHRM perspective. As discussed earlier, Nonaka's (Farnese et al., 2019; Nonaka, 1994) spiral of organisational knowledge creation presents several opportunities to capture IF knowledge and ensure it is shared and fostered in organisations. SHRM has been positioned as a powerful mechanism in establishing the strategic advantage of knowledge in organisations (Bollinger & Smith, 2001; Boxall, 1996; Eisenhardt & Santos, 2002; Haesli & Boxall, 2005; Wright et al., 2001) and is therefore positioned well to enact knowledge management strategies relevant to IF ability. SHRM practices and policies could be specifically targeted at recruitment, selection, and development strategies that will foster IF in organisations. Unique foresight knowledge, drawn from the collective tacit and personal experiences of organisational members could contribute to the development of dynamic capabilities in the organisation, leading to core competencies and ultimately, a sustained competitive advantage.

This review has inspired an integrative theoretical framework (Figure 2.3) for the study. Multidisciplinary factors of IF characteristics identified in the literature, along with Voros' (2003) generic foresight process model, are positioned within the KBV of the firm, where SHRM practices would contribute to the fostering and development of employee IF ability.

Figure 2.3 Theoretical framework for this study
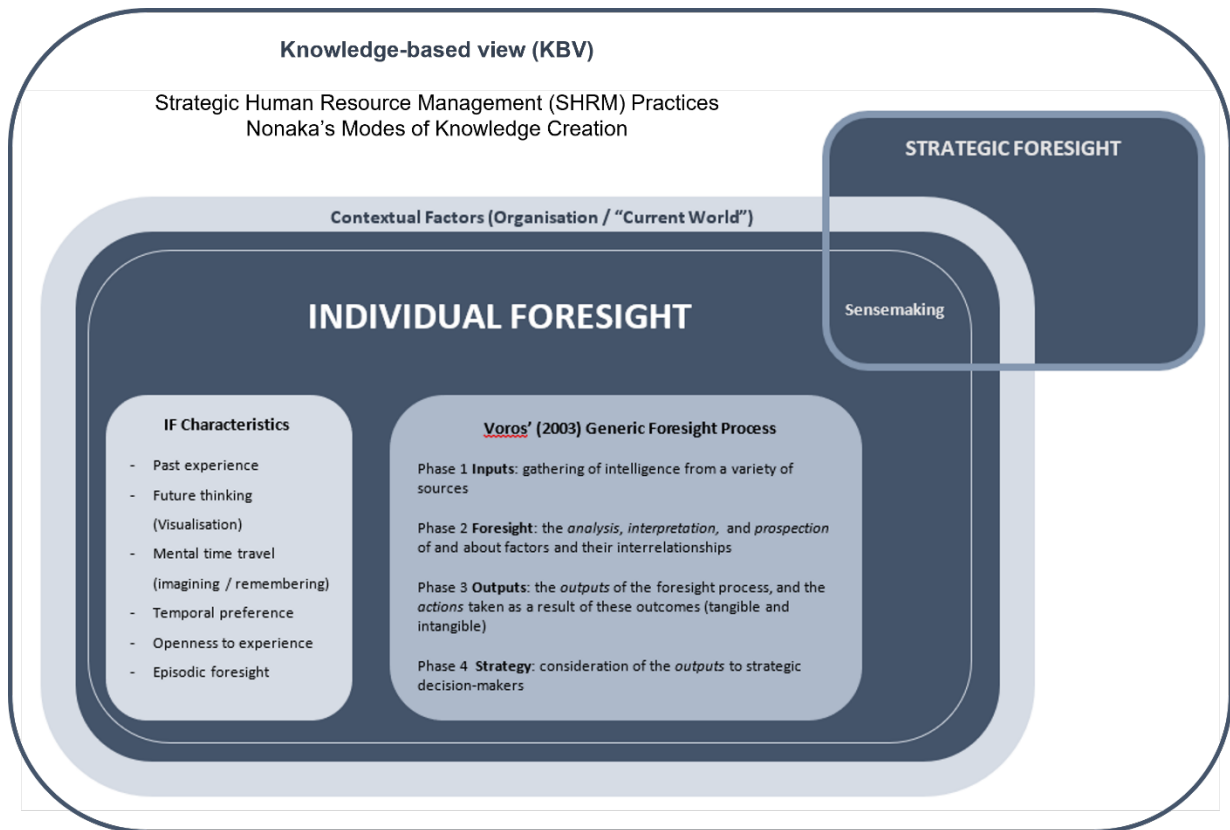
2.6. Summary and research questions

IF is not yet well understood in the context of organisations. The literature reveals a dearth of knowledge centred on the individual experience of foresight in organisations, with only limited qualitative research efforts aimed at the managerial level (Portaleoni et al., 2013). In addition, HRM practices that could be strategically targeted to foster and develop IF in organisations have not yet been established. Therefore, there are many unanswered questions regarding individual employee-level foresight. How do employees *do* foresight in organisations? Do all employees use IF in their work? If foresight is evident and helpful in employees' work, how could it be nurtured through HRM practices and policies?

The following research purpose statement and questions aim to address the range of opportunities highlighted in the literature for improving understanding of the phenomenon of IF in organisations. Importantly, the research questions reflect the phenomenological nature of this IF research. As van Manen (1990) explicates, the phenomenological researcher "must 'pull' the reader into the question in such a way that the reader cannot

help but wonder about the nature of the phenomenon in that way that the human scientist does." (p. 44). In its essence, phenomenological research demands we steer away from the magnetic pull toward theoretical abstraction in order to inspire the reader into an inquisitive mindset to "question deeply the very thing that is being questioned by the question" (van Manen, 1990, p. 44) – in this case – the phenomenon of IF in organisations.

The phenomenological question (in this case research sub-question two below) therefore acts as a focal point for the research, to return to throughout the study. Questions of knowledge about the phenomenon of IF should always return back to the lifeworld "where knowledge speaks through our lived experiences" providing a rich insight into the phenomenon as intended (van Manen, 1990, p. 46). Given the relatively unknown positioning of IF in organisations, the first research sub-question aims to establish the contextual nature in which IF exists in organisations, through the perspective of HRM professionals. Insights gained from research sub-question one will both inform the approach for research sub-question two and provide valuable insights regarding HRM practices associated with IF in organisations. The research problem statement, overall research question and two sub-questions are presented below.

Research problem statement:

Individual foresight experience in organisations is not yet fully understood, resulting in a lack of understanding about potential strategic human resource management practices that could foster and develop individual foresight to contribute to individual-level microfoundations, knowledge creation and dynamic capabilities of the firm.

Overall research question:

From the perspective of human resource management professionals, and through the experience of employees, what is the current understanding of individual foresight in organisations?

Sub-question one:

How do HRM professionals understand and construct (implicitly and explicitly) the value of IF, and practices utilised to identify IF ability, within their organisational contexts?

Sub-question two:

How do employees experience individual foresight in their organisation?

The research problem statement, overall research question and accompanying sub-questions guide the study with reference to the theoretical framework derived from the literature review (Figure 2.3). Chapter Three Methodology, presented next, provides the methodological approach for the research, outlining how the research design and selected methodologies will guide the research project and response to the shortfalls revealed in the IF literature.

3. Methodology

3.1.   Overview of the chapter

The previous chapter offered an overview of the literature arguing a further need for research into the IF phenomenon. Chapter three presents the methodological approach for the research. The chapter begins with an investigation of research paradigms and designs, resulting in the selection and justification of a qualitative approach for the study. A Grounded Theory (GT) approach for Phase One, and a Phenomenological research design for Phase Two are presented. Phase One adopts a GT design to explore the social roles and interactional context of HRM professionals and their understanding and meaning of IF in their organisations. Phase Two applies Interpretative Phenomenological Analysis (IPA) to explore the lived experience, or intentional essences of employees and their experience of IF in their organisation. Sampling approaches, data collection and analysis, validity, and quality issues, along with ethical considerations are presented.

3.2.   Ontological and epistemological perspectives

The theoretical paradigm for the research is conveyed here, along with selection of an appropriate design and strategies of inquiry suited to the research problem. The research paradigm refers to the *ontological* (i.e., nature of reality or worldview), in addition to the *epistemological* (i.e., what counts as knowledge and how that knowledge is justified) nature of the research, and the *methodological* considerations (i.e., the process of research) of the study (Creswell, 2013a). This study is approached from a worldview that knowledge is the product of individual cognition and is therefore subjective in nature and determined by the unique nature of individuals' experiences (Burrell & Morgan, 1992). The study first seeks to determine the value of foresight for organisations through investigating HRM professionals' understandings of foresight within the context of their organisation, requiring a social constructivist ontological perspective (Morgan & Smircich, 1980, p. 494). Ontological views adopted can be positioned within an interpretivist paradigm for the study. The main focus of this study is on Phase Two – which adopts a phenomenological design.

3.2.1.   The interpretive paradigm and hermeneutical phenomenology

The interpretive paradigm supports the implicit nature in which researchers seek to understand the social world *as it is*, that is, to interpret the social world subjectively, through the personal experience of those experiencing their social world (Burrell & Morgan, 1992, p. 28). Therefore, researching IF in organisations implies an interpretive paradigm. Interpretive social science emphasises the unique experience of humans and aims to capture the social nature of human life (Neuman, 2007), with an emphasis on capturing the role of individuals' subjective experiences as communicated through text (i.e., language) (Neuman, 1997). When describing the structure of the interpretive paradigm, Burrell and Morgan (1992) identify hermeneutics and phenomenology as two possible approaches.

Hermeneutics involves the interpretation and development of understanding of outputs from the human mind (Burrell & Morgan, 1992). Dilthey (in Burrell & Morgan, 1992, p. 236) argues that to understand a phenomenon and gain objective knowledge about that phenomenon, we must first experience the phenomenon through recalling the lived experience of the participant with that phenomenon. In relation to this study, particularly Phase Two, given the individual (idiosyncratic and not nomothetic) experience in which IF is being explored within their lifeworld, and the emphasis on interpretivism, hermeneutical phenomenology is a more closely aligned epistemological approach.

Hermeneutical phenomenology is concerned with research that is interested in the lived experience of individuals. van Manen (1990) describes hermeneutical phenomenology as focusing on the interpretation of *texts* of life to understand the lifeworld of the participant, relevant to the phenomenon. He defines the lifeworld as '…the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize, or reflect on it'; with *life text* in literal terms meaning written material (for example an interview transcript or written descriptions) which provide insight into the lived human experience of a phenomenon (van Manen, 1990, p. 9). For this study's Phase Two, the lifeworld of the participant is the organisation in which they work, with IF being the phenomenon studied. The aim of this study, therefore, is to research the lived experience of employees in organisations who are engaging with, or *doing*, IF. Qualitive research will facilitate this.

3.3. Strategies of inquiry

Qualitative research is ideally suited to explore a new phenomenon like IF due to its interpretive and naturalistic approach (Denzin & Lincoln, 2005). In addition, it utilises interpretive practices that address research problems through their application in a natural setting – considering the people and places central to the study – to arrive at a final interpretation of the problem (Creswell, 2013a). Further, Shaw and Frost (2015) believe that 'human experience is multidimensional and multi-ontological' (p. 1) and therefore research involving human experience can benefit from a pluralist approach to methodology, combining research methods to bring a 'more holistic in depth insight [through] a range of perspectives' (p. 5). Grounded Theory (GT) research, where the researcher simultaneously collects and analyses data to inform the development of abstract ideas (Charmaz, 2005b) is applicable to this study for Phase One and offers an opportunity to gain insight from multiple perspective regarding the value of foresight in organisations. However, the main intention for this study is to focus on the lived experience of individuals experiencing the phenomenon of IF – in which a phenomenological approach would be more suited. For this reason, Phases One and Two adopt different strategies of inquiry, resulting in a sequential methods approach (detailed below).

3.3.1.1. Phase One: Grounded Theory

Phase One aims to explore, through a sample of HR professionals, the potential nature of foresight prevalence in their organisations. It contextualises the meanings that HR professionals bring to their understanding of foresight. This is important to this study's Phase One approach, as Clarke, Braun, and Hayfield (2015) argue that rather than discovering universal meaning – "meaning is understood as always being tied to the context in which is it produced." (p. 223). In addition, incorporating insights from Phase One into Phase Two will add "rigour" to the data collection process (Yardley, 2000). The aim of Phase One is to identify potential areas of interest around the phenomenon of foresight and how employees in the HR professional's organisation might engage with foresight. Thematic Analysis (TA) will be utilised, as Braun and Clarke (2006) posit that when taken as a constructionist method, TA can help understand the "ways in which, events, realities, meanings, experiences and so on are the effects of a range of discourses operating within

society." (p. 81). The coding and TA of data for Phase One was undertaken utilising NVivo 12 qualitative data analysis software (see Section 3.9 Data Analysis – below). Approaching the analysis with a GT strategy of inquiry shares aspects of Charmaz's (in Holstein & Gubrium, 2008) constructionist approach, where she argues that understandings (such as those held by HR professionals) are derived from constructions within context (i.e. HR professionals' organisations), which emerge from interactions. The GT approach emphasises the identification of emergent concepts that explain the meanings and understandings of actors, to establish theory grounded in the interactional context (Corbin & Strauss, 2015).

3.3.1.2.   Phase Two: Interpretive Phenomenological Analysis

Phase Two seeks to explore employees' lived experience with foresight in their organisations. As discussed, this study aims to explore the *experience* of individuals in organisations partaking in non-formalised methods of conceptualisation associated with IF. In Phase Two the focus is not so much on exploring the different conditions under which the meanings of IF are understood (as per the GT approach in Phase One), but rather on exploring the descriptions of the phenomenon from the perspective of those who have experienced it (Starks & Brown Trinidad, 2007). To overcome the potential unrealistic technique of bracketing (Rennie, 2000), where analysts are encouraged to suspend their personal beliefs, expectations, biases and more – which is promoted as a key component of GT and traditional Husserlian phenomenology – a more contemporary qualitative strategy of inquiry termed *Interpretative Phenomenological Analysis (IPA)* will be deployed. Understanding the foundations of phenomenology is important in establishing the value of an IPA approach to the main and second phase of the study.

3.3.2.   Phenomenology and Interpretative Phenomenological Analysis

The phenomenological method stems from Kant's distinction between what our mind can never know about a *thing itself* (what Kant terms *the noumenon*) and what we know about the thing as it appears to us (the *phenomenon*) (Richardson, 1999). From this distinction, Husserl developed the empirical phenomenological approach – transcendental phenomenology – which seeks to define the experience of a phenomenon through consciousness; by developing written descriptions about the phenomenon which form the basis of a hermeneutical analysis to arrive at the *essence* of the phenomenon (Spinelli,

2005). This study adopts this approach to explore IF using four key characteristics of Husserlian phenomenology.

First, it espouses the importance of the role of consciousness in establishing the lived experience of a person (Giorgi, 1997). That is, the role of consciousness is acknowledged as it contributes to the meaning of the objects being studied. Second, the term *experience* more specifically refers to both the intuition (normal type of awareness) of *real objects*, as well as *presences* (Giorgi, 1997). These presences are of particular significance to this study because foresight does not have a realistic reference, rather it is a presence (i.e., it is not something we can tangibly hold like a real object – but rather - it can be 'present' in employees' lifeworlds). Third, the meaning of *phenomenon* refers to an accurate description of the presence of the phenomenon to the person experiencing it. That is, the phenomenon is only defined by the description of the individual who is experiencing the phenomenon (Giorgi, 1997). Finally, phenomenology demands *intentionality*, in that an essential feature of the act of consciousness in phenomenology is that it is directed to an object; not at the act of consciousness itself (unless the act of consciousness is the object or presence being targeted i.e., reflective acts). Several academics have proposed alternative qualitative approaches to emphasise the importance of hermeneutics, ideography, and symbolic interactionism in phenomenology (Eatough & Smith, 2008; Smith et al., 2009). These differences have been captured in the newer phenomenological approach of Interpretative Phenomenological Analysis (IPA).

In relation to Phase Two, van Manen (1990) recognises the value in seeking some form of methodological outline when undertaking phenomenological research. He identifies six methodological research activities (van Manen, 1990) similar to the five proposed steps of Giorgi (1997). This study adopted the IPA analysis guidelines proposed by Pietkiewicz and Smith (2014); as they are specifically aimed at addressing the focus on *interpretive* phenomenological analysis. However, the analysis drew on elements of van Manen (1990) and Giorgi's (1997) frameworks to optimise the phenomenological approach (see Table 3.1).

Table 3.1 A comparison of phenomenological methodological approaches and their application to Phase Two

Pietkiewicz & Smith's (2014) IPA practical guidelines for undertaking an IPA study	van Manen's (1990) six step process (Hermeneutical Phenomenology)	Giorgi's (1997) five step process (Pre-Transcendental Husserlian Phenomenology)
1) Formulating research questions and determining sample size and composition	1) Turning to a phenomenon which seriously interests us and commits us to the world	
Step one applied to Phase Two: *Research question was defined with an appropriate sample size and composition determined. The phenomenon of Individual Foresight, as experienced by employees in organisations, is the focus of this study.*		
2) Collecting data	2) Investigating experience as we live it rather than as we conceptualise it	1) Collecting of verbal data
Step two applied to Phase Two: *One-hour interviews were conducted with participants. Data collection was undertaken with an IPA design to stay close to the IF lived experience of participants. Interviews were transcribed by otter.ai and checked for accuracy.*		
3) Analysis of the qualitative material	3) Reflecting on the essential themes which characterise the phenomenon	2) The reading of data 3) The dividing of the data into parts 4) Organisation and expression of raw data into disciplinary language
Step three applied to Phase Two: *Theoretical memoing, reading, re-reading, initial noting to develop descriptive, linguistic, and conceptual comments, the identification of codes (emergent themes) translated into NVivo 12 as 'nodes'. Recoding (e.g., abstraction, subsumption, polarization) necessary throughout this iterative process leading to the identification of superordinate codes (parent nodes), and finally a cross-case analysis was undertaken with all Phase Two data.*		
4) Writing up an IPA study (a narrative account)	4) Describing the phenomenon through the art of writing and re-writing 5) Maintaining a strong and oriented pedagogical relation to the phenomenon 6) Balancing the research context by considering parts and whole	5) Expressing the structure of the phenomenon
Step four applied to Phase Two: *While Phase One results are presented in Results Chapter Four utilising a GT approach, Phase Two results from the IPA are presented in Chapters Five (The Person), Six (The Process) and Seven (The Outcomes and Context) and demonstrate the parts to whole journey, the cross-case analysis process, and a final Individual Foresight framework to summarise the outcomes of the IPA process.*		

IPA is a qualitative research approach that enables us to understand how people make sense of their lived experience (Smith et al., 2009). IPA comprises three important theoretical criterions of qualitative research: phenomenology, hermeneutics and ideography (Smith & Shinebourne, 2012). The nature of *interpretive* inquiry in IPA, and the specific focus on the individual and the particular; are key components that set IPA apart from the traditional Husserlian or transcendental phenomenology approach. Smith and Shinebourne (2012) discuss IPA as a process of engagement and interpretation on behalf of the researcher which highlights the hermeneutic nature of IPA. This draws on the work of Heidegger who argues that 'relatedness is a fundamental part of our constitution' and as such the view of a person is always as a 'person-in-context' (Larkin, Eatough, & Osborn, 2011, p. 324). In this regard, the personal and social come together in IPA, where the lifeworld of the participant is not considered mere context, but rather embodies the participant's being, and as such, the personal aspect of a participant's existence is 'unique, and refers to the *related, perspectival,* and *meaningful* nature of [the participant's] engagement and involvement *in* that lived, social world' (Larkin et al., 2011, p. 324).

In terms of this study, the social world is the organisation in which the participants experience IF. The social world referred to by Larkin et al. (2011) is associated with the concept of intersubjectivity, an accepted aspect of phenomenology in the IPA approach, which opposes the original Husserlian intention of reductionism in the process (Giorgi, 1997). Proponents of the IPA and hermeneutical phenomenological approach argue that bracketing out the researcher's experience and understanding from the analytical process is not possible (Finlay, 2012; Rennie, 2000). Indeed, the role of the researcher in the IPA process is a unique and an important aspect of the IPA approach.

3.4. The researcher in IPA

Researchers engaging in IPA are aware of their own subjectivity in the process, and generally accept that the intersubjective nature of the researcher and participant is one of the key features of the phenomenological strategy of inquiry (Finlay, 2012). Rennie (2000) describes the *double hermeneutic* nature of research, arguing that as agents, people are selective in how they represent their experience – with this experience being comprised of, and influenced by, the interests, values, beliefs of the person. He therefore posits that

people are interpreters of their own experience, and that this experience when expressed, is then interpreted and articulated by the researcher – thus the double hermeneutic in practice (Rennie, 2000). Despite more recent acceptance of the interpretative role of the researcher, debate exists about the benefits of a phenomenological reduction approach (Bevan, 2014). Bevan (2014) therefore encourages researchers to avoid the influence of personal knowledge during interviewing by conducting a self-dialogue aimed at being reflexive when asking questions, in addition to maintaining 'self-consciousness of one's own natural attitude' (pp. 138-139). This ensures a certain level of validity in the process of data collection and requires the work roles and career undertaken by the researcher to be observed.

Having fulfilled many roles as a Research Assistant over several years as a sessional academic, my experience with conducting interviews was extensive. Through my career spanning two decades as an academic, in addition to holding an executive managerial role in a not-for-profit community organisation for seventeen years, I have developed a strong ability to connect and communicate effectively with most people at all levels of both academic institutions – and the broader community. My level of professional communication, coupled with the ability to empathise, listen actively and probe effectively during interviews, aided in the collection of rich data from the interviews overall. Awareness of the biases and theoretical knowledge I hold, with a background in teaching tertiary-level Management and HRM content, enabled self-awareness and an intended 'withholding' of my own viewpoints – to allow the participants maximum opportunity to reflect on their own lifeworld. To assist, Rennie (2000) discusses the process whereby the researcher keeps a log to record 'hunches, speculations, [and] thoughts about the relations among categories', termed *theoretical memoing* (Glaser and Strauss in Rennie, 2000). This strategy was used by the researcher in objectifying the hermeneutic process by which they arrived at an understanding of IF (Rennie, 2000), and aligns with the suggestion by Minichiello, Aroni, and Hays (2008) to record a personal fieldnote file. Other research (Kump 2022, p. 648) suggests this hermeneutic process involves 'emerging intuitive insights' that the researcher must validate through the use of methodology – as addressed in the research design. This insight was helpful when encountering challenges during data collection, as exemplified below.

Three interviews in Phase Two (of the 27 employee interviews) challenged me, however, theoretical memoing undertaken after each interview captured the reasoning behind these challenges. They included: an inability for the participant/s to relate their experience of foresight to a work context; an inability for the participant/s to speak of their personal lived experience of foresight as opposed to their thoughts about foresight in others or as a result of rules and procedures in their organisation; and/or a propensity for the participant to revert back to a 'corporate' foresight perspective – discussing the contextual factors influencing foresight behaviour – rather than their own lived experience. The outcomes of these interviews were still valuable, with unique insights captured in terms of contextual organisational factors that may impact or influence IF, as well as raising questions about the role of formal procedures and policies in encouraging foresightful behaviour. This discussion continues in the results chapters. Further details about the data collection and analysis processes undertaken for the study are included in Sections 3.6, 3.7 and 3.8 below.

3.5. Site selection and sampling

Phases One and Two of the study adopted the purposive sampling approach of judgement sampling. Cavana, Delahaye, and Sekaran (2001) explain that judgement sampling draws on individuals who are in an optimal position to provide the information required for the study. Given the specific nature of phenomenological research in drawing on the lived experience of individuals with IF in organisations, this sampling method was deemed appropriate. Phase One adopted judgement sampling to recruit six HRM professionals in organisations across a variety of industries to form an expert panel[1]. Although this thesis primarily focuses on employees' foresight through the application of phenomenological methodology, Phase One focuses on engaging HRM professionals to seek their views and understanding of foresight in their organisations. Thus, Phase One uses a Thematic Analysis approach (Braun & Clarke, 2006) to gain insight into HRM professionals' views about the value and potential for IF capability to contribute to their organisation's

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[1] Note that the use of 'expert panel' in this context does not refer to the Delphi expert panel methodology. The panel of experts in this study refers to a collection of HRM Professionals who will participate in the IPA process through individual interviews to explore their lived experience with IF, as HRM professionals in organisations.

success. Interviews were conducted with each member of the panel to explore understanding of IF in organisations and determine the nature and role of IF in their organisation. From Phase One, the researcher was interested in identifying any differences across industries regarding the potential use or organisational value of IF foresight, as well as in gaining understanding of how foresight might exist in employees or be identified or developed from a HRM perspective.

It was anticipated that the combined knowledge and experience of the members of this panel would provide valuable insight regarding the types of positions within their organisation where IF may be used. While this expectation was met in some regard (discussed in Chapter Four), a welcome additional outcome from the Phase One interviews was the insights gained around differences between how employees in contrasting industries (i.e., Finance & Insurance versus Utility) utilise IF in their work. For example, the potential use of foresight in maintenance and response teams in one organisation (in the Utility Industry), was in contrast to the individually focused professional approach to career progression in the other organisation (i.e., in the Finance & Insurance Industry). Therefore, learning from participants in Phase One underscored the importance of selecting two contrasting organisational contexts to be purposively sampled in Phase Two. Phase Two utilised judgement sampling based on data gathered in Phase One, to determine which employees (in pre-determined positions) within organisations of contrasting industries should be invited to take part in the study. The final sample comprised 12 interviews with employees from an organisation within the Finance & Insurance Industry, and 15 interviews with employees from an organisation within the Utilities Industry in the Sunshine Coast region in Australia. This purposive approach to sampling in Phases One and Two is supported by Neuman (1997) who argues that a key situation in which purposive sampling is appropriate, is when the researcher is seeking in-depth investigation of specific cases to gain a deeper understanding of the research focus. The final sample of 27 is a large sample for IPA research, and the implications of a larger sample size should therefore be addressed.

3.5.1. Implications of a larger IPA sample size and the issue of saturation

Smith et al. (2009) discuss implications associated with larger samples when undertaking IPA. Typically, they describe that professional doctorates involve collection of between four and ten interviews (Smith et al. 2009 p. 52). These implications stem from the

idiographic nature of IPA data collection, and the value of maintaining individual examples from within a larger sample size. Specifically, the authors suggest the importance of the researcher establishing what might constitute a recurrent theme; encouraging decisions around what percentage (e.g., 30%, 50%, 75%, 100%) of the sample the emergent or super-ordinate theme is present (Smith et al., 2009). This approach enhances the validity of the findings given a larger sample. From a practical perspective, this can involve the development of a table detailing which cases (participants) the recurrent theme was present, and then the total number of cases in the sample – in order to discuss the recurrent theme's prevalence. This approach has been adopted by the researcher, along with additional steps in the analysis process (detailed below in Section 3.8) and is evident in results chapters five to seven. Another consideration in the large sample size was data saturation.

Regarding qualitative data analysis and the number of interviews (i.e., cases) to be sampled, Rennie (2000) highlights the issue of saturation. Saturation occurs when the researcher observes the repetitive nature of data, or experiences confirmation of previously collected data (Morse, 1994). Charmaz (2005a) argues that researchers are increasingly justifying the extent of their data collection on the sole criterion of saturation; ending their data collection when saturation occurs. Whilst this study aimed to adopt a similar approach regarding saturation, the researcher found that rich insights prevailed due to different participant lifeworlds – even within the same organisation. Thus, all planned interviews were included in the sample, with a total of 27 interviews being included in the IPA for Phase Two.

3.5.2. Final sample recruitment and attributes

The recruitment process for Phases One and Two varied slightly. Phase One participants were contacted directly by the researcher at the outset and invited to take part in the project. To comply with ethical research practices for Phase Two participants, the researcher first provided the individual who was the main point of contact with information to be issued to the relevant employees in their organisation. Participants then contacted the researcher if they were interested in receiving information about the study and ultimately were willing to participate. Both Phase One and Phase Two participants were sent a copy of their respective Research Project Information Sheets (RPIS) (see Appendix 2) as approved by

the University of the Sunshine Coast Human Research Ethics Committee. Sample details of participants for both phases are detailed below. For Phase One participants (see Table 3.2) pseudonyms, job title, number of years' experience in the field of human resources, industry type and size of organisation are listed. These details are of most relevance given the expert nature of the panel, and the interest in the contextual nature of industry differences for the researcher. Phase Two participant details (see Table 3.3) include pseudonyms, industry type and the length of their IPA interview. The majority of IPA interviews (approximately two thirds) were between 45-60 minutes in length and despite the shorter interview lengths most interviews delivered *rich* data (see section 3.7).

Table 3.2 Phase One participants by pseudonym

Interview Number	Pseudonym	Job Title	Years active in field of Human Resources	Australian Bureau of Statistics Industry Classification	Size of Organisation Large = >1000 Med = 200-1000 SME = <200
Ph1Int1	**Samantha**	Director Human Resources	37 years	Education & Training	Large
Ph1Int2	**Natalie**	Head of Human Resources	22 years	Finance & Insurance	Large
Ph1Int3	**David**	Executive Manager People, Culture & Safety	29 years	Utility	Med
Ph1Int4	**Anna**	General Manager People and Safety	25 years	Health Care & Social Assistance	SME
Ph1Int5	**Katherine**	Human Resources Manager	30 years	Accommodation & Food Services	Large
Ph1Int6	**Karen**	Group Executive Business Performance	24 years	Public Administration & Safety	Large

Table 3.3 Phase Two participants by pseudonym

Interview ID Number	Pseudonym	Organisation type	Total interview time (mins)
Ph2Int1	Amanda	Finance & Insurance	55:55
Ph2Int2	Geoffrey	Finance & Insurance	60:04
Ph2Int3	Anna	Finance & Insurance	56:57
Ph2Int4	Gill	Finance & Insurance	38:46
Ph2Int5	Matt	Finance & Insurance	44:01
Ph2Int6	John	Finance & Insurance	50:11
Ph2Int7	Janelle	Finance & Insurance	41:29
Ph2Int8	Marie	Finance & Insurance	49:31
Ph2Int9	Alan	Finance & Insurance	47:25
Ph2Int10	David	Finance & Insurance	32:33
Ph2Int11	Sarah	Finance & Insurance	35:37
Ph2Int12	Thomas	Finance & Insurance	50:52
Ph2Int13	Stephanie	Utility	41:41
Ph2Int14	Rachel	Utility	56:40
Ph2Int15	Howard	Utility	50:46
Ph2Int16	Bonnie	Utility	60:00
Ph2Int17	Michael	Utility	52:42
Ph2Int18	Brad	Utility	37:16
Ph2Int19	Darren	Utility	48:05
Ph2Int20	Vincent	Utility	41:38
Ph2Int21	Jake	Utility	36:22
Ph2Int22	Hugh	Utility	40:45
Ph2Int23	Byron	Utility	44:48
Ph2Int24	Edward	Utility	60:03
Ph2Int25	Ronnie	Utility	50:53
Ph2Int26	Leo	Utility	48:02
Ph2Int27	Alistair	Utility	59:01

3.6. Data collection

Qualitative research, incorporating TA and IPA requires the collection of *rich* data (Pietkiewicz & Smith, 2014; Smith et al., 2009). Smith et al. (2009) argue that rich data implies participants are provided an opportunity to speak freely and reflectively, in a storytelling nature to develop their ideas. They posit that the purpose of the IPA interview is driven by the research question, and that the aim of the interviewer is to facilitate an interaction where the individual is encouraged to tell their own story – with the interviewer's main task being to listen (Smith et al., 2009). Coming at the research question sideways during the interview process prevents the participant from being asked abstract questions. Others also suggest that prompts should be included in the schedule for situations where a participant may find questions too general or abstract (Pietkiewicz & Smith, 2014; Smith & Shinebourne, 2012).

3.6.1. Developing the IPA interview schedule

Focusing on the IPA component of this study, Pietkiewicz and Smith (2014) discuss types of appropriate questions to explore mental phenomena such as thoughts, memories, associations and fantasies. Bevan (2014) outlines three key interview domains for descriptive phenomenological interviewing that the researcher adopted for this study: contextualisation, apprehending the phenomenon, and clarifying the phenomenon. Contextualisation provides an opportunity for participants to begin their interview as close as possible to their lifeworld using descriptive / narrative context questions (Bevan, 2014). Apprehending the phenomenon focuses the participant's experience on the phenomenon of interest itself, and using repeated descriptive questions is recommended to overcome the issue that participants may experience many 'modes of appearance' of a 'thing or experience' (Sokolowski in Bevan, 2014, p. 140). Finally, to clarify the phenomenon the use of free imaginative variation is required, which van Manen (1990, pp. 106-107) describes as a means in which the researcher determines which themes of a phenomenon are essential compared to those which are 'more incidentally related' to that phenomenon. The importance of clarifying the phenomenon was evident after data collection began, when two participants highlighted instances where IF might be considered a hindrance in certain situations. As a result, the researcher adapted the interview protocol. An example of IPA interview questioning can be seen in Table 3.4.

Table 3.4 A structure of phenomenological interviewing

Phenomenological Attitude	Research Approach	Interview Structure	Method	Example Question
Phenomenological Reduction (Epoché)	Acceptance of Natural Attitude of Participants Reflexive Critical Dialogue with Self Active Listening	Contextualisation (eliciting the Lifeworld in Natural Attitude)	Descriptive / Narrative Context Questions	"Tell me about your position here at xxx" or "Tell me about how you came to be in the position of xxx and what your day usually looks like"
		Apprehending the Phenomenon (Modes of Appearing in Natural Attitude)	Descriptive and Structural Questions of Modes of Appearing	"Tell me about an incident or scenario where you felt your foresight played a role."
		Clarifying the Phenomenon (Meaning Through Imaginative Variation)	Imaginative Variation: Varying of Structure Questions	"Do you think that foresight can be a negative thing to have in some situations?"

Source: Adapted from Bevan (2014)

Bevan's three-stage process of moving from contextualisation through to imaginative variation captures the essence of the Smith et al. (2009) discussion around rhythm in the IPA interview. Here the authors attempt to provide guidance to the researcher on the nature of IPA interviews moving from the specific to the generic. Incorporating these aspects into the interview process maximised the opportunity to gather quality data and maintain authenticity (trustworthiness, rigour and validity) of the phenomenological inquiry – as described by Guba and Lincoln (2005). The final interview protocols for Phases One and Two can be observed in Appendices 3 and 4.

3.6.2. Pre-interview preparation

Clarifying expectation for participants around the nature of the IPA interview process is important. The idea of providing some context and preparation for the interview is consistent with Smith et al.'s (2009) recommendation to socialise participants by providing

them with information useful for their interview preparation (i.e., expected timing, an interview schedule or a summary of main principles etc.). Participants in both phases of the research received an email (See Appendices 5 and 6) one week prior to their interview to provide an opportunity for the participant to a) develop a shared understanding of the phenomenon of IF, b) come prepared to the interview to recollect two or three key instances in their working life where they have been required to draw on personal experience to make decisions about their current actions, which have then impacted on their future job outcomes (i.e. use of IF), and c) complete a short survey entitled *Consideration of Future Consequences* (See Section 3.7.2.1 for more details) which was to be utilised in the data analysis process at a later date. Consent from participants (in line with the *Human Research Ethics* approval given by University of the Sunshine Coast) was gained prior to the researcher undertaking interviews for both Phases One and Two.

3.6.3. Piloting the instrument

There are many benefits to piloting a qualitative interview schedule. Ravitch and Carl (2021) argue the piloting process is an opportunity to refine an instrument and make changes to improve 'rigor' and 'validity' of the study (p. 91). Two pilot interviews were undertaken in medium to large organisations with similar respondents to those of the study (Zikmund, Babin, Carr, & Griffin, 2013). The data was later validated in consultation between the researcher and the research team, in terms of the quality of the interview process, and the nature and suitability of the data. Adjustments were made to the process and content components of the qualitative data collection process. An important focus was to ensure alignment with qualitative open-ended questions, as well as appropriate probing questions to address literature review findings and gaps. Minor but important adjustments were made to the interview schedule with the addition of a contextual question as a result of information provided by the pilot interviewees.

3.6.4. Data collection and management

Data collection initially began in a face-to-face setting for all Phase One participants. The first two participants of Phase Two were interviewed in a face-to-face setting, however, the 2021 pandemic influenced protocols around social distancing resulted in utilising videoconference technology for remaining data collection. All interviews were conducted in

private settings suitable for the participant. Interviews began with a welcome and introduction, including a summary of the project (checking participant comprehension of the research project information sheet), ensuring consent was obtained, and checking participant readiness to proceed with the interview. Interviews were audio recorded with full semantic records of the interview being transcribed as a requirement for IPA data analysis (Smith et al., 2009; Smith & Osborn, 2004). Transcriptions were processed through Otter.ai – a web-based speech to text transcription technology company. They were then checked for accuracy and de-identified to protect the identity of participants.

3.7. Phase One data analysis process – Thematic Analysis

The purpose of Phase One was to undertake a Thematic Analysis (TA) consistent with an inductive process, to give integrity to the constructed and interactionist nature of the HR Executive participants' roles and social contexts in their organisation. Braun and Clarke (2006) discuss the need to consider the intention for TA in terms of how the data is represented. For this study, Phase One is an opportunity to understand the overall themes emerging from the expert panel in terms of how IF is considered and understood in their organisations. In focusing on the overarching themes from the entire data set for Phase One, the aim of the researcher is to present a 'rich overall description' (Braun & Clarke, 2006, p. 83) from the analysis – given that IF is not a well-known phenomenon within the context of organisations. Braun and Clarke (2006, 2019) propose six steps as a guideline for undertaking TA which involve the researcher familiarising themselves with the data, generating initial codes, generating (initial) themes, reviewing themes, defining and naming themes and finally, producing a report.

An important aspect of the Phase One data analysis is the extension of Braun and Clarke's (2006) second TA stage - 'generating initial codes'. When coding for Phase One, the researcher adopted the Constant Comparative Method (CCM) proposed by Glaser (1965). Glaser (1965) outlines four stages of CCM: comparing incidents applicable to each category, integrating categories and their properties, delimiting the theory, and writing the theory. One of the features of stage one when 'comparing incidents' is particularly useful for the nature of the analysis in Phase One of this study. Glaser (1965, p. 439) advises 'while coding an incident for a category, compare it with the previous incident coded in the same

category'. This process was undertaken by the researcher utilising NVivo, a qualitative data software program that allows for ease of coding and comparison of data, which supports Glaser's CCM. This approach supports the interpretive nature of the research design for this project for the essentials of coding categories of meaning within the text.

The development of themes following initial coding is a crucial aspect of the Phase One data analysis process. In terms of Braun and Clark's (2006) suggested approach for Steps three and four of coding i.e., the generating and then reviewing of themes, Corbin and Strauss (2015) propose using open coding, axial coding and selective coding as steps to arrive at codes and relationships between codes (processes) prior to the final support of an emerging theme(s). In preparing and undertaking coding for Phase One, the researcher undertook extensive research into qualitative methods for coding and data analysis suitable for this study's Phase One data analysis. Table 3.5 details the methods of coding available, and utilised (where appropriate) throughout the coding stage of data analysis for Phase One (note that coding approaches, provided in Table 3.5, are also divided by early 'First Cycle' and later 'Second Cycle' moments of coding). Owing to the interpretive nature of this study, reflexivity was also an important consideration during data analysis of Phase One.

As mentioned earlier in the chapter, the role of the researcher in the research process can be viewed as problematic. Indeed, Braun and Clarke (2019, p. 589) themselves offer a 'reflexive commentary' about the essential role of reflexivity in TA and declare the following as part of their revised 'Reflexive' TA approach:

> *"The researcher's role in knowledge production is at the heart of our approach! Reflexive TA needs to be implemented with theoretical knowingness and transparency; the researcher strives to be fully cognisant of the philosophical sensibility and theoretical assumptions informing their use of TA; and these are consistently, coherently, and transparently enacted throughout the analytic process and reporting of the research." (p. 594)*

In terms of this study, the researcher has already identified the choice of adopting an IPA approach for Phase Two. Here in Phase One, the 'Interpretive' component of IPA is also evidenced in the researcher's role of interpreting the Phase One data. Saldana (2012) proposes that qualitative researchers should actively reflect and write about several areas throughout the analysis phase of their research in the form of memos – to address

researcher reflexivity. As evidenced throughout this thesis and the analysis process, the researcher engaged with several of these types of memos including how they personally relate to the participants and / or phenomenon, how the code choices and their operational definitions came about, observations about emergent patterns, categories, themes, and concepts as well as possible connections between categories or themes, potential linkages to theory, and more. These reflections are captured within the data analysis for both Phases One and Two. Application of the approaches outlined here for the process of data analysis for Phase One are located in results chapter four.

Table 3.5 Approach to coding methodology

Coding type [and method]	Source (in Saldana)	Purpose for this study
Phase One – First Cycle		
Attribute [Grammatical]	Bazeley (2003)	Identifies points of difference between the participants that can be attributed to organisation, industry, experience etc. The researcher anticipates that Attribute Coding may enable identification of unanticipated patterns of: - interrelationship (i.e., correlation) - influences and affects (i.e., causality).
Holistic [Exploratory]	Dey (1993)	Facilitates a holistic view of the data that is preferable for the researcher given the exploratory nature of the study. Involves identifying basic themes or issues in the data by absorbing them as a whole (researcher as a lumper), as opposed to analysing the data line by line (researcher as a splitter).
Simultaneous [Grammatical]	Miles & Huberman (1994)	Enables segments of the text to be coded as both descriptively and inferentially meaningful, permitting the researcher to apply both Descriptive Coding (where applicable) and other codes more suited to their interpretive lens.
Descriptive (Topic) [Elemental]	Miles & Huberman (1994)	Summarises the basic topic of a passage in a word of short phrase. The researcher proposes to move from Holistic Coding to Descriptive Coding in the first instance.
Process [Elemental]	Charmaz (2002); Corbin & Strauss (2008); Strauss and Corbin (1998)	Applies gerunds (e.g., thinking, reflecting, mentoring) to identify *actions* in the data. The researcher anticipates some data will be related to the process of IF. Process Coding can assist in identifying observable activity (e.g., reflecting) and conceptual action (e.g., adapting).
Initial [Elemental]	Charmaz (2006); Corbin & Strauss (2008); Strauss and Corbin (1998)	Permits a deeper reflection of the data in anticipation of Second Cycle Coding. The researcher anticipates this coding type will compliment Process Coding in seeking 'analytical leads for further exploration' (Saldana, 2009). It involves 'breaking down qualitative data into discrete parts, closely examining them, and comparing them for similarities and differences' (Strauss & Corbin, 1998 in Saldana 2009).

Coding type [and method]	Source (in Saldana)	Purpose for this study
Phase One – Second Cycle		
Pattern	Miles & Huberman (1994)	Groups together summaries of codes that represent an 'emergent theme, configuration, or explanation…' in order to establish … 'a smaller number of sets, themes, or constructs' (Miles and Huberman 1994 in Saldana, 2009). The researcher intends to collate similarly coded passages that may or may not belong to parent codes in order to bring about greater meaning.
Axial [Focused]	Glaser & Strauss (1967); Strauss & Corbin (1998) [Charmaz, 2006]	Focused Coding seeks to identify the most frequent or qualitatively significant Initial Codes (from First Cycle) to develop the most prominent categories in the corpus. Saldana (2009, p. 155) posits that focused coding '…is a stream-lined adaptation of classic grounded theory's Axial Coding'. The researcher will seek to establish categories without focussing on the properties and dimensions of codes – to enable prominent categories to emerge – which may be useful in the development of phase two data collection methodology. Axial Coding seeks to reassemble the codes that were broken down in the Initial Coding process, with the aim of identifying a dominant 'category', which is described through the identification of 'Properties (i.e. characteristics or attributes) and dimensions (the location of a property along a continuum or range)' (Saldana, 2009, p. 159). Ideally the researcher would aim to achieve saturation during Axial Coding – meaning repetition in the data is observed – or the researcher experiences confirmation of previously collected data (Morse, 1994). This is not the intent in phase one due to the sequential nature and purpose of phase one in informing phase two data collection.
Theoretical (Selective)	Charmaz (2006); Corbin & Strauss (2008); Strauss & Corbin (1998)	Brings together all earlier categorisations and codes with the aim of arriving at a *central* or *core category* that should summarise what the study is about. The researcher will endeavour to 'move the analytic story in a theoretical direction' (Charmaz, 2006, p. 63) by adopting this coding method.

Source: Developed by the author from Saldana (2012)

3.8. Phase Two data analysis process - Interpretative Phenomenological Analysis

The analysis of qualitative data through the application of the IPA framework can be inspiring, time consuming, complex, iterative and multi-directional (Pietkiewicz & Smith, 2014; Smith & Shinebourne, 2012). Through immersion in the data, the researcher aims to seek insights into what *matters* for participants, and then explore what these things *mean* to participants (Larkin & Thompson, 2012; Smith & Shinebourne, 2012). The aim is to develop an interpretive synthesis of the analytic work (Larkin & Thompson, 2012), capturing what Eatough and Smith (2008) describe as a dual reading; where the researcher gets close to the participant's personal experience, but is then able to adopt a more interpretive stance to offer a deeper level hermeneutic reading than what the participant may offer themselves. The importance of this shift between emic and etic perspectives is highlighted by Pietkiewicz and Smith (2014), although in particular reference to the use of IPA in qualitative psychology research. They argue that staying close to the personal experience of the participant protects the researcher from claims of psychological or psychiatric reductionism; while observing the data through the lens of the researcher and interpreting it through the application of concepts relevant to the discipline which highlights understanding of the research problem (Pietkiewicz & Smith, 2014). Rennie (2000, p. 487) also advocates that the shift between external and internal experience for the researcher is central to *good interpretation* and requires the researcher to monitor the degree of fit between the two perspectives. Whilst the techniques for IPA data analysis do not conform to a prescriptive methodology the approach has been described as similar, yet different, to both phenomenology and Grounded Theory qualitative analysis (Smith & Osborn, 2004).

Table 3.6 details the suggested IPA analysis process advocated by Smith et al. (2009) and the activities undertaken for this research project for each step. This table is followed by a more detailed and specific description and graphical representation of the process of IPA analysis applied in this study.

Table 3.6 IPA analysis process[2]

Phase two - Suggested IPA analysis process	Activities associated with each step for this study
Step 1: Reading and re-reading **Step 2^:** Initial noting ^Steps 1 and 2 merge following the initial transcript reading, such that reading, and note-taking will occur as the same time through the analysis	• The researcher immersed themselves in the original data, beginning with the first original transcript • Interviews were recorded, and the researcher first listened to the recording of the interview while looking at the transcript, attempting to imagine the voice of the participant in future readings of the transcript • The researcher read and re-read the transcript to orient to a slower process of focusing on the participant as the focus of analysis • Immediately following each interview, the researcher undertook reflexive memoing (journaling) to contribute to the objective nature of the write-up of results. This aligned with Smith et al.'s (2009) recommendation that the researcher record their own observations about the interview recollection, and record the most striking observations in a journal to bracket them off while orienting to the participant experience during this initial stage • The researcher maintained an open mind and noted anything of interest within the transcript (this process became Step Two – initial noting) • This step represented a free textual analysis (i.e., there is no requirement at this stage to divide text into meaning units) • Initial noting was undertaken observing the following approach: **Descriptive comments:** production of a comprehensive and detailed set of notes and comments on the data (first level annotation) **Linguistic comments:** Focusing on language use to note when language use and content are clearly interrelated (for example use of repetition, change in tone etc) (second level annotation)

[2] The authors (Smith et al., 2009) suggest that parts of this process may be undertaken using a computer. The researcher utilised NVivo qualitative analysis software to: a) assist in the process of cataloguing and encoding the raw text (Steps 2 and 3) b) enhance the querying process to look at the clustering of relationships between codes (Step 4), and c) assist with the visual mapping of connections across the emergent themes (Steps 4-6).

Phase two - Suggested IPA analysis process	Activities associated with each step for this study
	Conceptual comments: Shifting in focus towards the participant's overarching understanding of issues they are discussing. This is a time-consuming process of conceptually interpreting the data through discussion, reflection, trial-and-error, and refinement of ideas (third level annotation). • As part of Step 2, **Theoretical memoing** (Glaser and Strauss in Rennie, 2000) was undertaken for each individual transcript where a log was kept to record 'hunches, speculations, [and] thoughts about the relations among categories'. This approach involved the researcher addressing the double hermeneutic process by developing theoretical memos after revisiting each transcript case.
Step 3: Developing emergent themes	• Utilising the larger data set comprising original transcripts and notes, the researcher reduces the volume of detail (i.e., transcript and original notes) whilst maintaining complexity, in terms of mapping the interrelationships, connections and patterns between exploratory notes • Focusing on discrete chunks of transcript the researcher analysed exploratory comments • The original whole of the interview became a set of parts (which will come together in a new whole at the end of the analysis in the write up) • Emergent themes reflected the participants' original words and thoughts and the researcher's interpretation
Step 4: Searching for connections across emergent themes	• Transcripts were transferred into NVivo where Emergent Theme (codes in NVivo) were developed and observed from one case to the next • The researcher then developed an NVivo project map for each case. This involved identifying connections across emergent themes *within each case* to arrive at case-specific conceptual maps. • Working with the sets of themes developed, the researcher developed a sunburst chart for each case • The researcher worked on how they thought the themes fit together (i.e., clustering of related themes) developing a set of tables with each table representing an emergent theme (or set of themes). • As noted by Smith et al. (2009) some emergent themes were discarded at this step (not all emergent themes need to be incorporated), and this depends on the research question and the researcher's innovation and organisation of the analysis

Phase two - Suggested IPA analysis process	Activities associated with each step for this study
	• In searching for patterns and connections between emergent themes, the researcher included abstraction, subsumption, polarisation, and contextualisation of the themes to arrive at superordinate themes (refer to Smith et al. (2009) for further explanation of these suggestions)
Step 5: Moving to the next case	• In studies with multiple cases (such as this one) Smith et al. (2009) then suggest the researcher moves to the next case and repeats the process, ensuring they've treated each case on its own terms • The researcher undertook this repeated process with every case, bracketing any ideas that emerged from the analysis of each case as they travelled through the analysis (through reflexive memoing) • There is acknowledgment that during the repeated analyses of cases the researcher will be influenced by what they found in in earlier cases, however, an important skill in IPA is to allow new themes to emerge with each case • Following the development and analysis of emergent themes, the researcher returned to the initial script for each case (now being aware of the final set of emergent themes), and without referring to the data from NVivo 1) developed a final reflexive memo notes for each case (in Excel) 2) identified the top three to five emergent themes relevant to each case (in Excel), and 3) compared these with the results from NVivo to check reliability of the process, and validity of the emergent themes. • Although slight variations existed in this process, this was deemed highly appropriate given the qualitative nature of the data, and the consideration of smaller, or less frequently coded themes that may be key to the case and emerged from the data. • This process informed the development of superordinate themes which were observed across every case (see Step 6).
Step 6: Looking for patterns across cases	• The researcher brought together the emergent themes from steps 4 and 5 looking for connections between cases and themes • Questions in this step include: What connections are there across cases? How does the theme in one case illuminate a different case? Which themes are the most potent?

Phase Two - Suggested IPA analysis process	Activities associated with each step for this study
	- Utilising Excel and the themes emerging across cases, this led to the solidification of superordinate themes which were shared across cases - This step of the analysis also identified ways in which participants represented unique idiosyncratic instances - but also shared higher order superordinate themes within the group - The outcome of this step is shown in a table which summarises how emergent themes are nested within superordinate themes - illustrating the consideration of themes from each participant's case. (Refer to Results Chapters for relevant tables)

Source: Developed by the author from Smith et al. (2009)

3.8.1. Step One: Reading and re-reading

IPA analysis begins with reading a transcript several times to develop a holistic perspective whilst noting interesting or significant points about what the participant said (Eatough & Smith, 2008; Smith & Osborn, 2004). Notes developed by the researcher form part of the reflexive memoing process (Glaser and Strauss in Rennie, 2000). An example of reflexive memoing is shown in Figure 3.1.

Figure 3.1 An example of reflexive memoing directly following Alan's interview

> *Alan was another intriguing participant in terms of his different cognition and the area he works in. He is a trained actuary i.e., works in actuarial science. I was particularly interested to get down to the individual level of foresight at play in Alan's experience…as opposed to the process of foresight he supposedly is exposed to every day. Alan surprised me with his self-awareness – but did explain he has an interest in human behaviour and was thus interested in our conversation. Through his description of foresight, Alan several times referred to 'resistance to change' – and reflected on moments of confrontation / discussion in meetings where he felt he was the one resisting change. He expressed his strong belief that it's important to have a 'devil's advocate' (researcher's term) role in these discussions as there's a lot of enthusiasm in a culture like xxx for people to get together and go yeah yeah yeah we can do this and this and this. Interestingly, Alan had been at xxx for 12 years, and consequently was able to talk very succinctly about drawing on his past experience in terms of using foresight when a new or revisited proposal was put forward (he gave a lengthy example of the HR department wanting to utilise the existing database for generating survey recalls / reminders etc – which he felt was a very bad idea as it was outside the scope of what the database was designed for and has seen a previous similar strategy turn into a very complex system that then became managed by IT).*

3.8.2. Step Two: Initial noting

Termed by Smith et al. (2009), initial noting is an extremely time-intensive yet detailed method to get as close as possible to the participant's experience at an exploratory level. Initial noting requires the researcher to examine each transcript from three different perspectives, as depicted in Table 3.7 below.

Table 3.7 Initial noting approach in IPA

Comment type / perspective	Explanation	Formatting in Word
Descriptive comments…	Comments focused on describing the content of what the participant has said, the subject of the talk within the transcript	Normal font
Linguistic comments…	Comments focused upon exploring the specific use of language by the participant	Italic font
Conceptual comments…	Comments focused on engaging at a more interrogative and conceptual level	Underlined font

Source: Adopted from Smith et al. (2009)

The following case example (Figure 3.2) of initial noting was developed from *Hugh*'s transcript. As seen, the initial noting process was undertaken in Microsoft Word to allow multiple 'comments' to be identified against the recommended three criteria (noted above) for the initial noting analysis.

Figure 3.2 Example of Hugh's Initial Noting Process (<u>excluding</u> emergent themes)

Interview transcript excerpt	Initial noting example
I'm constantly assessing the tasks that the situation is - and then making sure that I'm dealing with the highest priorities. And then coming back down and checking on the next lower ones and some of that's mental - and some of that we, you know, we have an incident management room that is set up and designed to help us facilitate that thinking. So we write our actions up on the board. We are, you know, we know - we've got the time for our next sequence to be issued out to people we've got key steps.	Referring to cognitive process: Prioritising of tasks and ensuring no tasks have been neglected. Both mental (tacit) cognition but also explicit knowledge – sharing in formal mechanisms such as on a board. *'Constantly assessing' might indicate it's an iterative process – the internal cognitions.* <u>Role of tacit versus explicit knowledge management and generation of ideas – facilitation of explicit means of processing information through formal work structures (rooms / teams / boards)</u>

3.8.3. Step Three: Developing emergent themes

Following completion of the initial noting process for each case, the researcher proceeded with the development of emergent themes – termed as such through the IPA approach. In IPA, generating emergent themes requires careful observation of the initial noting comments to ensure authenticity and integrity in staying as close as possible to the participant's life world – while developing statements or phrases that are 'revealing about the phenomenon or experience being described' (van Manen, 1990, p. 93). van Manen's theming approach will be outlined here in the methodology section to demonstrate the process the researcher undertook in the latter stages of the analysis. First, the 'wholistic or sententious approach' (van Manen, 1990, p. 94) encourages the researcher to capture the overall meaning of a text – which, for this study, involved the development of a statement by the researcher that summarised the overall essence or essential meaning of the transcript for each participant. An example of a sententious theme from *Leo's* case was: "Individual foresight stems from life experiences that should then be shared in a team environment through storytelling and the sharing of others' knowledge and experience.".

Second, van Manen (1990, p. 94) suggests a 'selective or highlighting approach' to phenomenological theming within cases. This aligns with the initial noting approach of IPA outlined above and continued below. Selective theming is about finding phrases within the text that might represent a theme related to the experience of the participant. A selective theming example for Rachel is shown below:

"I'll write notes and I find that really useful because thoughts and ideas get generated that way. [ ] And then I'd context the results, initially through the literature and the reading I had done, and I'd straightaway then start to just churn out some questions and relationships, and I found that really helpful."	Rachel's Case Themes: 'Cognition' 'Individual Skills and Disposition' 'Recording Information'

The final phenomenological theming approach proposed by van Manen (1990, p. 94) is the 'detailed or line-by-line approach' whereby the researcher carefully reads each line of

the transcript and then interprets the sentence in terms of its meaning in the context of the research. This approach enables the researcher to stay even closer to the participant's recount and experience and is captured in Smith et al.'s (2009) initial noting process, which was undertaken by the researcher and demonstrated below in Figure 3.3. As per IPA analysis, emergent themes are noted in bold font, in the right-hand column, following the development of the Initial Notes as demonstrated for *Hugh's* interview. *Hugh* is the manager of a large utility operations section involving multiple engineering and technology teams and has worked for over 10 years in his field.

Figure 3.3 Example of Hugh's Initial Noting Process (<u>adding</u> IPA emergent themes)

Interview transcript excerpt	Initial noting example	IPA Emergent Themes
1. I'm constantly assessing the tasks that the 2. situation is - and then making sure that I'm 3. dealing with the highest priorities. And then 4. coming back down and checking on the next 5. lower ones and some of that's mental - and 6. some of that we, you know, we have an 7. incident management room that is set up and 8. designed to help us facilitate that thinking. So 9. we write our actions up on the board. We are, 10. you know, we know - we've got the time for our 11. next sequence to be issued out to people 12. we've got key steps.	Referring to cognitive process: Prioritising of tasks and ensuring no tasks have been neglected. Both mental (tacit) cognition but also explicit knowledge – sharing in formal mechanisms such as on a board. *'Constantly assessing' might indicate it's an iterative process – the internal cognitions.* <u>Role of tacit versus explicit knowledge management and generation of ideas – facilitation of explicit means of processing information through formal work structures (rooms / teams / boards)</u>	**Assessing or prioritising situation** **Cognition** **Using formal work structures**

In the case of *Hugh* in Figure 3.3, this example shows the emergence of three codes: 'Assessing or prioritising situation', 'Cognition', 'Using formal work structures'. For example, for the 'Assessing or prioritising situation' theme the descriptive comments regarding the prioritisation of tasks were closely reflected by Hugh's description of his quote *"dealing with the highest priorities"* on line three, and then his *"checking on the next lower ones"* on lines four and five. For the 'Cognition' theme, the linguistic comment of *"constantly assessing"* on line one represents Hugh's internal thinking. Finally, the theme 'Using formal work

structures' was reflected in Hugh's comments about the *"incident management room"* on line seven and the action taken to *"write our actions up on the board"* in line nine - which were captured in both the descriptive and conceptual noting comments of the researcher.

During the process of developing emergent themes, and aligned with advice from Smith et al. (2009), the researcher sought efficiencies in reducing the volume of data (for example the reflexive memos, initial noting documents and transcripts), whilst maintaining a quality of detail through the exploratory process that would facilitate a closeness to the lifeworld of the participant. This was largely achieved through the process outlined above, and then facilitated further by the transfer of data to the qualitative data analysis software, NVivo.

3.8.3.1.   Transferring data to NVivo

As proposed, following completion of the initial noting and emergent theme development for each case using manual procedures, all transcripts were loaded into NVivo software for a more advanced analysis. An excerpt from *Hugh's* transcript above, and its subsequent coding in NVivo can be viewed in Figure 3.4.

Figure 3.4 Screen capture of Hugh's emergent themes transferred to NVivo
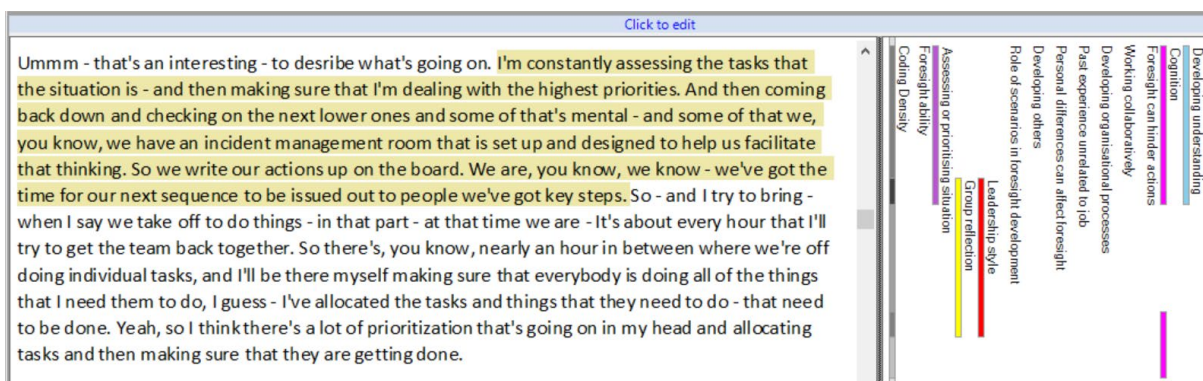
3.8.4.   Step 4: Searching for connections across emergent themes (utilising NVivo)

This step involved the utilisation of several coding strategies including abstraction, subsumption, polarization, and contextualisation. The researcher found Smith et al.'s (2009)

description and advice about seeking patterns and connections in the data via these methods useful (See Table 3.8).

Table 3.8 Smith et al.'s (2009) recommended pattern-seeking coding strategies

Coding strategy	Method
Abstraction…	*Identifying patterns between emergent themes and developing super-ordinate themes. Putting like with like and developing a new name for a cluster.*
Subsumption…	*An emergent theme itself acquires a super-ordinate status – to bring together a series of related themes*
Polarization…	*Identifying oppositional relationships between emergent themes by focusing on difference instead of similarity*
Contextualisation…	*Considering connections between emergent themes based on the contextual or narrative elements in an analysis*

Source: Developed from Smith et al. (1990) *"Searching for Connections Across Emergent Themes"*

One suggested approach in the search for emergent theme connections involved conceptual mapping for each case (See Figure 3.5 below). Initially, this involved a very manual process of printing out the list of the emergent themes (codes) for each case to work with a canvas (in this case a large table) on which the researcher could move the pieces around to explore emerging patterns within the case. Reflecting on Step Three, where emergent themes were identified, which represented 'one manifestation of the hermeneutic circle' (Smith et al., 2009, p. 91) – the researcher agreed that it felt like a shift from the whole of an interview to parts. This process didn't feel comfortable given the idiographic nature of the IPA approach, and the researcher therefore enjoyed Step Four – which began the process of bringing the parts back together to search for patterns within the cases – prior to across the cases in Steps Five and Six. It was interesting to observe the reality of the double hermeneutic process at this point, as the researcher did feel they were interpreting the life world experience of the participants, in order to make sense of that world in the context of the research. The process of searching for patterns and connections in the data in NVivo involved establishing several key emergent themes, re-assessing similar-

themed codes, with some themes acquiring super-ordinate status. The results chapters provide more detail about the Step four process in IPA utilising data from the study.

Figure 3.5 Sunburst chart representing Ronnie's transcript and related codes
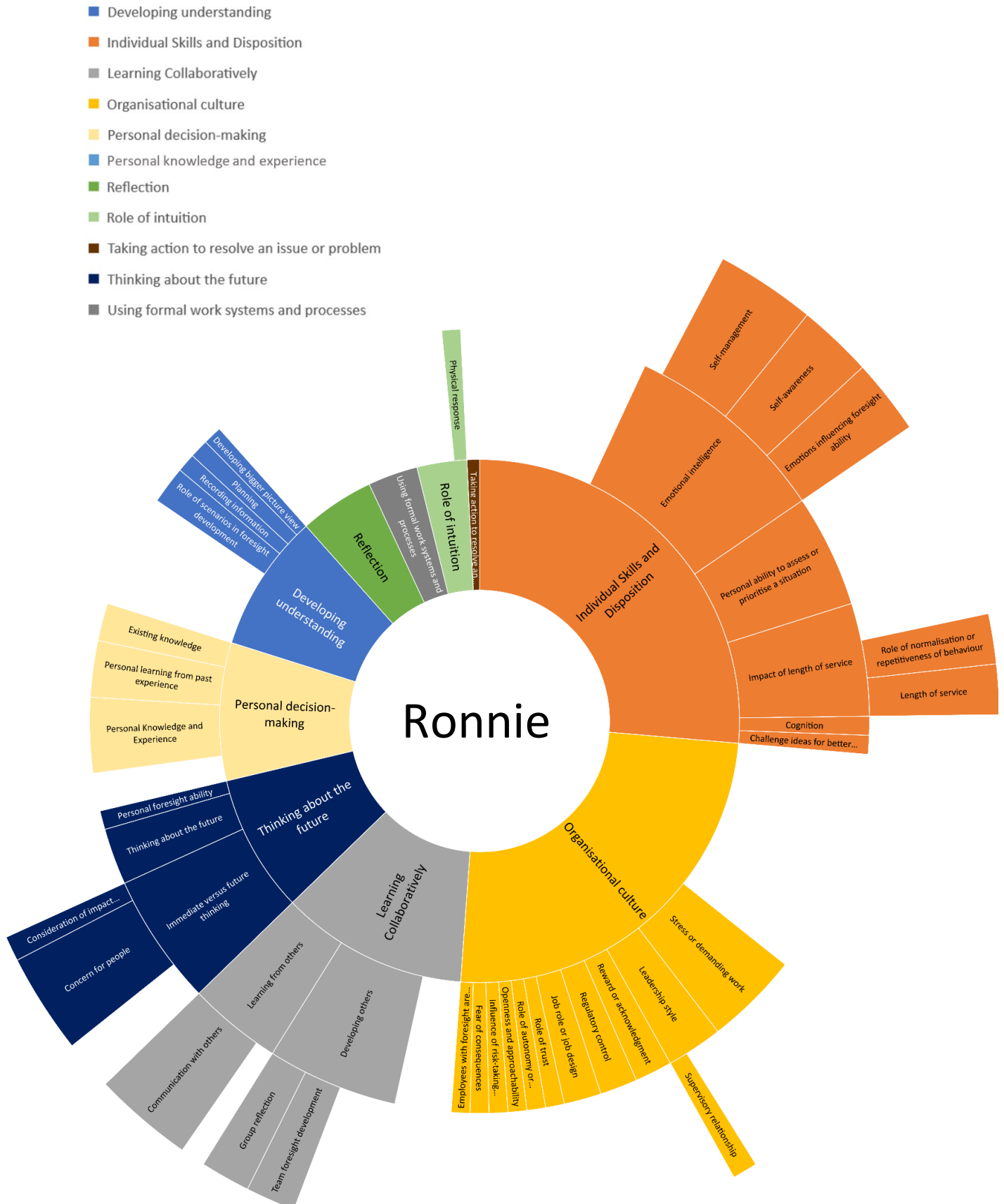
3.8.5. Step 5: Moving to the next case

A priority in moving from one case to the next in IPA analysis is the importance of maintaining efforts to treat each case as its own analysis initially. The researcher was reminded when moving through the cases, to adhere to good reflexive memoing practices, recalling the value of phenomenological reduction to maximise the validity of the data collection process. Some researchers and proponents of the IPA and hermeneutical phenomenological approach argue, as previously mentioned, bracketing out the researcher's experience and understanding from the analytical process is not possible (Finlay, 2012; Rennie, 2000). However, as Bevan (2014) proposes, there are ways researchers can seek to avoid the influence of personal knowledge during the phenomenological interview process. His suggestion for researchers to conduct a self-dialogue to maintain reflexivity was adopted by the researcher, who thus took on a 'phenomenological attitude' or 'epoché' to maintain the validity of the data collection process (Bevan, 2014). To support an epoché approach to the data collection, the researcher developed a process for Step Five that was completed for each of the 27 cases, involving the coming together of many aspects of the data. This process involved:

1. Re-reading the post-interview reflexive memo for the case
2. Re-reading the original transcript
3. Writing a new reflexive memo which had developed in its conceptual nature owing to the experience and knowledge now possessed by the researcher
4. Observing superordinate themes from the original transcript (this was done 'blindly' by the researcher who was now experienced and could recall these themes readily)
5. Creating a bullet list of key themes that the researcher felt reflected the case (recorded in an excel spreadsheet)
6. Comparing the bullet-pointed themes with those in the hierarchical data produced from NVivo (to check for consistency – the results were extremely encouraging)
7. Developing a 'sententious' statement for each case (van Manen, 1990).
8. Observing and recording any higher order qualities or concepts emerging from each case, to be analysed in Step Six

Figure 3.6 below shows a screen capture of the data developed in Excel during this process.

Figure 3.6 Excel data excerpt of Stage Five

Name	Participant key emergent themes	Participant (individual) - researcher reflections	Column D: Van Manen: Sententious approach / Column E onwards: Van Manen: Selective / Highlight approach
Alistair	1. Learning collaboratively 2. Taking action 3. Reflection	- Alistair's job role managing safety of large plants influenced active behaviour and thinking about outcomes of decisions made now - Networking, collaboration and information sharing were valuable aspects of Alistair's day-to-day work activities and work culture - Experience and industry knowledge were crucial for positive networking outcomes (collaboration) and 'knowing' what action to take in scenarios - Regulatory control were an important aspect of Alistair's job and often drove or influenced actions Leadership style and openness in sharing knowledge were considered important features of Alistair's workplace - Alistair had high emotional intelligence as demonstrated through his actions and consideration of other work colleagues - Reflection in poignant moments had major influence of actions taken (or not taken) as a result of foresight	*Foresight is enhanced through extensive experience, knowledge, emotional intelligence and network power, as well as the ability to take time and reflect on what is needed in moments of critical incidents.*
Geoffrey	1. Individual skills and disposition 2. Developing understanding 3. Organisational culture 4. Personal knowledge and experience 5. Reflection	- Foresight is learning from experiences - The process of foresight involves scenarios - thinking about stakeholders and how they'll be impacted (e.g. in a meeting) - Use of anaology - Chess - play out the different scnenarios and synapses in your head - then taking time to reflect in own time if needed - Empathy and principles guide behaviours and decision-making - Adversity enhances empathy and ability to think from different perspectives - Thinking in frameworks and in principles - applying this to different scnearious rather than thinking in specific practice - allows a wider lens and consideration of wider implications - Personal experience allows you to filter your ideas / projections - Emotional intelligence, sensing people's reactions - is important when brain is processing lots of different pieces of information - Important to remain objective in the 'analysis' phase - to recognise any biases from past experience / or preconceptions about something you're read etc. - Need to surround yourself with people who will challenge your thinking - and need to listen well - and create a culture where people feel comfortable challenging you - Foresight culture requires a level of "security, comfort and safety" - people need the freedom to THINK. - Driving analogy - thinking forward!	*Individual foresight develops from a range of factors including experience, the way a person thinks - in terms of approaching scenarios with empathy, active listening, thinking in principles rather than practically - your emotional intelligence, the adversity you've had in life and the culture you foster in terms of being open to having thoughts challenged through shared reflection and the sharing of knowledge.*

Source: Developed by the

3.8.6. Step 6: Looking for patterns across the cases

Advancing the analysis to focus on across-case patterns and themes required a thorough understanding of the interpretive nature of both the study, and the role of the researcher. Appropriate interpretive data analysis strategies facilitated the search for patterns and major themes – specifically with this new focus on across case analysis. Phenomenology, as discussed, is an interpretive theory, and as such requires an interpretative approach that 'gives *abstract understanding* greater priority than explanation' (Charmaz, 2014, p. 230).

In Step Six, the researcher developed a number of super-ordinate themes which incorporated key emergent themes identified from the analysis in Steps Four and Five. This process involved the researcher asking questions aligned with Smith et al.'s IPA process such as:

- "What connections are there across cases?
- How does a theme in one case help illuminate a different case?
- Which themes are the most potent?" (2009, p. 101).

Importantly, at this stage of the analysis, the researcher is required to maintain the unique idiosyncratic instances occurring within cases – and ensure they are represented at the higher level – as they share the higher order superordinate themes within the group. The detailed process undertaken in Step Five - to pull out key themes and supporting transcript excerpts - made the task of ensuring idiosyncratic representation straightforward, transparent, and highly valid in terms of staying close to the lifeworld of participants.

3.9. The write up of Phase One and Phase Two

3.9.1. Phase One: The write up of TA

Results chapter four presents findings from Phase One of the study. The distinction between the nature of analyses for Phase One and Phase Two is also evident in the nature of the write-up for these two difference phases. Phase One write up focuses on the emergent codes and categories represented in the data from Phase One participants. The

focus of results in chapter four is not articulated through the lifeworld experience of participants (as is Phase Two), but rather through emergent understandings of HRM professionals in relation to their social constructions of IF in organisations, based on their interaction and built from their professional roles (i.e., context), and contributing factors of the organisation to IF. This approach is endorsed by Charmaz (2014) who posits that grounded theory, containing both positivist and interpretivist elements, is reliant on the researcher's ability to bring meaning to observations through their interpretivist lens, resulting in general statements built on a foundation of specifics that have emerged from the research and provide context in which theory can be situated. As mentioned in the summary of Chapter 2, results from research sub question one both informed understanding and emergent concepts for sub question two and identified potential HRM practices relevant to IF ability in organisations.

3.9.2. Phase Two: The write up of IPA

Whilst Table 3.6 details the process of analysis in IPA, considerable importance is also placed on the writing up of the analysis. Writing up the research involves movement from final themes to a narrative about the study, describing each of the themes with detailed explanation and incorporation of abstracts from interviews (Pietkiewicz & Smith, 2014). Smith et al. (2009) discuss the importance of the write-up in terms of conveying the experience of the participants to the reader. They refer to the nature of the write-up, indicating it can be more discursive than many other qualitative research results sections (Smith et al., 2009). This point is supported by van Manen (1990) who advocates that in hermeneutic phenomenology, writing is not merely something you do to present the results of the study, rather, hermeneutic phenomenology *is* a form of writing. The write-up in qualitative studies should also consider reflexivity (Creswell, 2013a).

Creswell (2013a) professes that qualitative researchers of this day are more likely to acknowledge the role of the researcher in their writing than in previous years. Burrell and Morgan (1992, p. 244) describe reflexivity as 'the process of turning back on oneself and looking at what has been going on'. In IPA reflexivity plays an even more crucial role in the interpretation (or *I* in IPA) element of the approach, with Smith et al. (2009) asserting that

the majority of the write up in IPA is dedicated to the researcher's analytic interpretations of the text (along with transcript extracts). The write up of the Phase Two results incorporates reflexive knowledge captured in memos throughout the process of the data collection and analysis.

3.10. Validity and quality

An increasing number of qualitative researchers have grown dissatisfied with the inappropriate application of validity and reliability measures specific to quantitative research, being applied in qualitative research (Elliott, Fischer, & Rennie, 1999; Guba & Lincoln, 2005; Smith et al., 2009). Pertinent to this study, Guba and Lincoln (2005, p. 205) when discussing the controversy of validity in qualitative research ask the questions 'Are we *interpretively* rigorous? Can our co-created constructions be trusted to provide some purchase on some important human phenomenon?'. These are the types of important questions that apply to this study, and as such received attention to establish validation in the research. In their handbook *Interpretative Phenomenological Analysis: Theory, Method and* Research, Smith et al. (2009) focus on four essential qualities of qualitative research, as presented by Yardley (2000). These qualities and their associated characteristics, which have been considered throughout this study, are shown in Table 3.9.

Table 3.9 Yardley's (2000) characteristics of good qualitative research

Essential qualities	Examples of the form each can take
Sensitivity to context	Theoretical; relevant literature; empirical data; sociocultural setting; participants' perspectives; ethical issues
Commitment and rigour	In-depth engagement with topic; methodological competence/skill; thorough data collection; depth/breadth of analysis
Transparency and coherence	Clarity and power of description/argument; transparent methods and data presentation; fit between theory and method; reflexivity
Impact and importance	Theoretical (enriching understanding); socio-cultural; practical (for community, policy makers, health workers)

Source: Adapted from Yardley (2000)

Importantly, Guba and Lincoln (2005) propose validity as an *ethical relationship*, listing several criteria for quality. These criteria include: Positionality (standpoint, judgements); communities of discourse, and research sites as arbiters of quality; voice (the extent the text represents more than one voice); critical subjectivity (intense self-reflexivity); reciprocity in the research relationship (as opposed to hierarchy); sacredness (a regard for the role of science in human development); and sharing the benefits of our position as academics (Guba & Lincoln, 2005). This study adheres to many of these pre-requisites for ethical research. In terms of self-reflexivity, the researcher identifies their standpoint as part of the qualitative interpretive research process.

This study was undertaken under the guidance of those in academic positions, who regularly engage with the project, and provide the feedback noted by Guba and Lincoln as valuable. The TA and IPA analyses process detailed previously ensure appropriate representation of multiple perspectives / voices in the study. The final thesis will also seek to contribute to the body of knowledge already seeking to understand individuals and knowledge creation in the workplace. In addition, Larkin and Thompson (2012) argue that several features indicate a quality IPA study including: the collection of appropriate data; an idiographic focus; an analysis that focuses on 'how things are understood' rather than on 'what happened'; and appropriate use of triangulation, extracts and commentary to ensure transparency. Ensuring conformity to the processes and procedures outlined within this methodology section maximised the opportunity for this study to fulfil the expectations outlined above. The following section seeks to addresses the possible ethical considerations relevant to this study.

3.11. Ethical considerations

Avoidance of harm is identified as one of the driving factors behind ethical practice in qualitative and other social science research involving human subjects (Israel & Hay, 2006; Neuman, 2007; Smith et al., 2009). Particularly in IPA research, when the interview process is focused on discussion of the lived experience of participants, there is a possibility that talking about sensitive issues may result in potential psychological harm for some individuals (Smith et al., 2009). The perceived potential for physical harm in this study is negligible due to the nature of the data collection process (i.e., very low risk interviews), however, obtaining informed consent from the participants was essential.

Informed consent involves two important activities: that participants comprehend the study, including its risks, and that they voluntarily agree to the nature of the study and their role within it (Israel & Hay, 2006). As part of the process of seeking human research ethics approval from the University of the Sunshine Coast Human Research Ethics Committee (USC HREC), a consent form which refers to the Research Project Information Sheet (RPIS – See Appendix 2) containing all of this information, was prepared for the participants, and signed prior to their participation in the research (See Appendix 7).

Orb, Eisenhauer, and Wynaden (2001) discuss the moral obligation of researchers of ensuring anonymity and confidentiality of research participants. Pseudonyms will be adopted when publishing the data due to the verbatim extracts that are likely to be used. It was important that the process of informed consent included the provision of the RPIS and ensured that the participants were informed of the nature of confidentiality and anonymity issues in the study. All risks were identified for the research and considered when preparing the Human Research Ethics Application. The ethics approval number for the study was S191343.

3.12. Summary

This chapter has sourced relevant qualitative research literature to support, challenge and develop a sound methodological approach for the study. Taking an ontological view, that multiple realities exist and are formed through the knowledge shared by individuals, this study seeks to understand IF from the lived experience of employees in the workplace. This view supports an interpretivist paradigm for the study. The hermeneutic nature of the study was discussed, acknowledging the role of the researcher and participant in interpreting, and understanding employees' lived experience with IF in organisations. While a Grounded Theory approach was deemed appropriate for Phase One, Phenomenology, and specifically IPA, was identified as the preferred methodology for Phase Two. As such, sampling methods aligned with these approaches were described. Two phases for the research were outlined with sampling and data collection strategies defined. Finally, quality, validity and ethical issues appropriate to this qualitative research study were explored and addressed. Chapter Four will now present the findings from Phase One of the research project.

4. Phase One Results

4.1. Overview of the chapter

As outlined in chapter three, the methodology for this study involves two phases of research. In this chapter, the findings from Phase One are presented. Insight from HRM professionals in organisational settings about how they understand and construct (implicitly and explicitly) the value of IF, and which practices are currently utilised to identify IF ability, was collected. Data from Phase One provided a surprisingly rich insight into not only the perceptions of foresight held by HRM professionals, but also the personal experiences of these executives in either using or observing IF in their organisation. Phase One data aligned well with an inductive approach; inductively building new knowledge about how IF exists in workplaces, and the different aspects and processes involved. Chapter four begins with presenting overall broad themes stemming from Phase One interviews, before exploring these in detail utilising rich descriptions and examples from the data. The chapter concludes with a summary of the key inductive themes relevant to HRM professionals' understanding of IF in their organisational context, which will inform the data collection, interpretation, and implications in Phase Two.

4.2. Overall Individual-level and organisational-level IF factors

The major themes and sub-themes of Phase One were represented in four broad areas (See Figure 4.1): *IF Characteristics and Contributing Factors* (1), regarding what HR professionals described as characteristics of IF; *Challenges for Developing IF* (2), which described the main influencing factors at both employee and organisational levels; *Outcomes of IF* (3) for the organisation and employees, and *HR Practices for IF* (4) which summarised existing perceptions of practices used to identify similar aspects to IF.

Figure 4.1 Phase One major themes 1-4 - and sub-themes
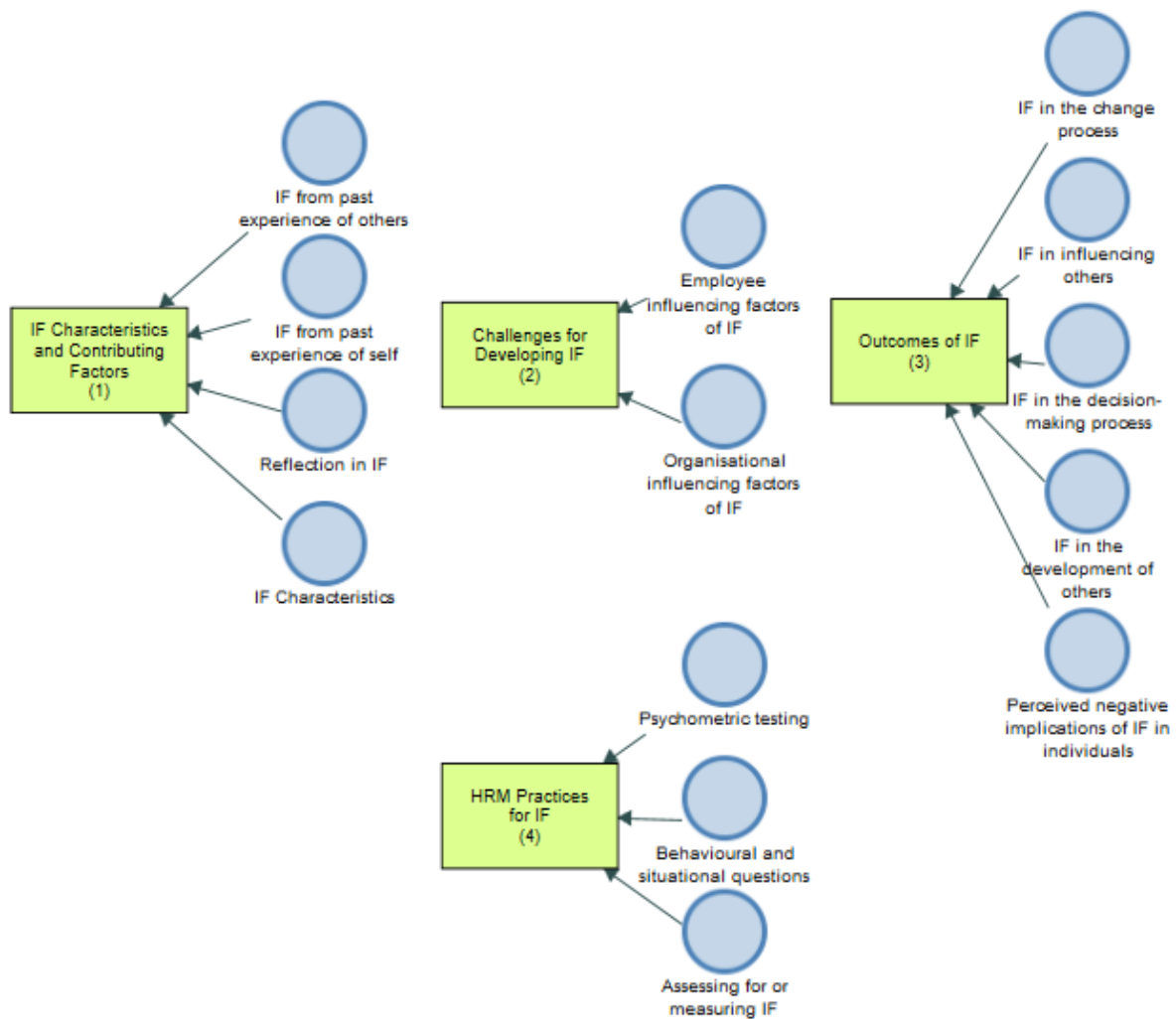
The *perceived characteristics and contributing factors* (1) identified for individuals with foresight are presented first, followed by the *challenges for developing IF* (2) at both the employee- and organisational-level perspectives, and then the *outcomes of IF* (3) as perceived by the HRM executive participants. The chapter concludes with findings regarding *HRM practices for IF* (4) and then presents a summary of HRM professionals' perceived understanding of IF in organisations, where Phase One findings will inform important elements of the Phase Two research.

4.3. HRM professionals' perceived characteristics of individuals with IF, and contributing factors - major theme 1

HRM professionals gave in-depth descriptions of how they perceived that individuals experienced IF in their organisation. These descriptions were categorised with the major theme of *IF Characteristics and Contributing Factors* (1). Importantly, and aligned with the concept of mental time travel (MTT) *past experience* (of either 'self' or 'others') emerged as one of the sub-themes and was perceived as playing a vital role in contributing to IF capability. The second sub-theme *IF characteristics* captured the many individual-level characteristics and nuances HRM professionals associated with IF ability and demonstrated the complexity in how these characteristics are associated with many other aspects of IF ability. Interestingly, and relevant to the sensemaking discussed in chapter 2, the action of *reflection* emerged as the final sub-theme and was perceived as a valuable component of IF. Figure 4.2 highlights the four sub-themes of the individual-level contributors to IF identified by HRM professionals.

Figure 4.2 Sub-themes of theme 1 - IF Characteristics and contributing factors
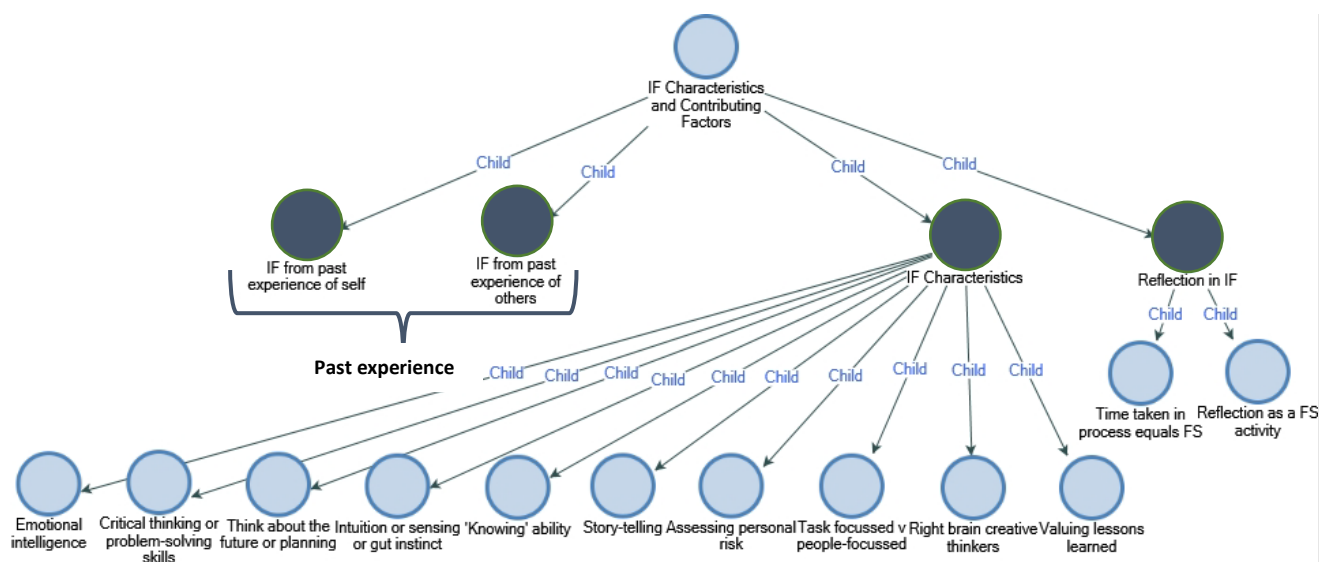
The following narrative provides excerpts from transcripts of Phase One that illustrate these four individual-level contributors of IF, representation by the middle layer of Figure 4.2. The findings are essentially presented in three major sections: Past Experience (a combination of self and others'), IF Characteristics, and Reflection. At times important

associations between sub-themes featured strongly in interviews; these associated themes have been highlighted throughout the analysis accordingly.

4.3.1. IF from past experience of self / others

A major contributor to a person's IF was reported to be either their own or others' work experience and knowledge. In the context of this research, IF from past experience of *self* refers to instances where the employee had experienced similar situations, in their own work life, to current or new circumstances in which they now found themselves. For example, *Natalie* explained how she used her past experience in her job, *"So having that previous experience and that foresight to appreciate that dynamic… knowing how the team of people… had reacted before and using that information to then tailor your approach"*. Participants either explained their own personal experience of work, or how they witnessed other employees drawing on *their* experience to engage in IF behaviour (or relying on the foresight of others to inform their foresight) called IF from past experience of *others*. *David* described his work area's reliance on others' IF experience: *"We rely on the foresight of the crews themselves, right through their knowledge they've picked up by working on the network for… 20 to 30 years."*.

Past experience has been established as a major sub-theme of 'IF Characteristics and other contributors' due to its many associations with other sub-themes - particularly the sub-theme IF characteristics. Strong connections emerged in areas of future thinking, intuition, critical thinking, and emotional intelligence (see Figure 4.3)**.**

Figure 4.3 Past experience associated with sub-theme IF Characteristics
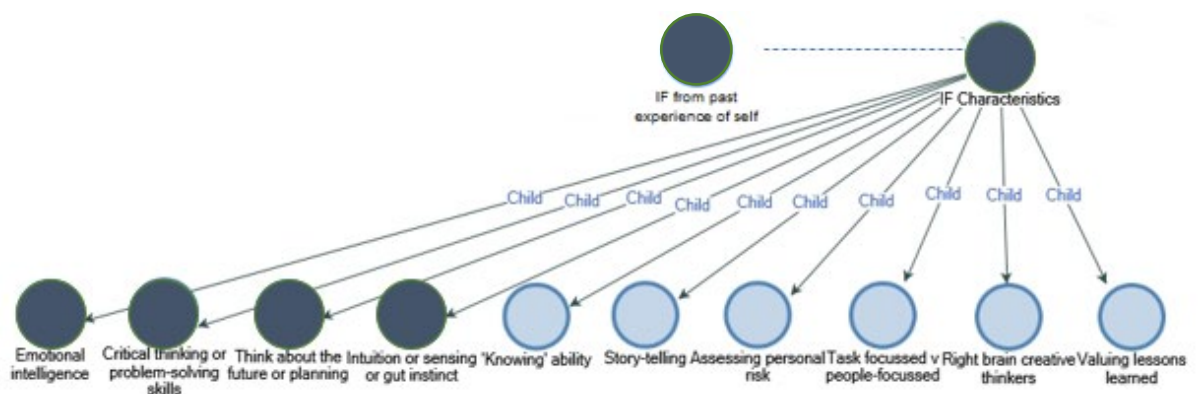
This was an exciting insight considering that the literature revealed future thinking and interpretation and analysis were important components of IF - however intuition or emotional intelligence did not emerge from the foresight literature. The association of these cognitive abilities to past experience could indicate several insights. First, prioritising experience of employees (also related to tenure) may prove important when managing workforce planning. Second, personal experience is related to an employee's sense of 'knowing' – required for IF ability in projecting themselves into the future (Tulving, 1985b). *David* highlighted this with his comment, *"And they just know, through their own experience at that site, and how it has operated in the past, what to do when"*. Third, given the importance of intuition in certain decision-making conditions (Dane & Pratt, 2007; Julmi, 2019), and the established role of emotional intelligence in contributing to positive decision outcomes (Istianingsih, Masnun, & Pratiwi, 2020) these two phenomena could play an important role in IF ability and should be considered in the data collection approach for Phase Two. The relevance of past experience to a participant's understanding of intuition was exemplified in *Samantha's* comment, *"So my gut is finely tuned, I feel after many years, and that comes from really many frames of references."*.

Another connection related to a different sub-theme of 'Challenges of IF' for individuals which was Knowledge or experience for IF takes time. This outcome seems logical given the association of experience to the length of time an employee has spent gathering organisational knowledge, in other words, their tenure. *David* highlighted the role of experience to his perceived concept of IF, *"…it can take you five years to build the knowledge… an alarm system… will go off… those guys know through that experience… a manual work around… to keep it operating effectively."*.

Finally, past experience was discussed by participants in relation to the development of others – especially through opportunities for mentoring as *Anna* explained when she said, *"I'm drawing a lot on the stories… the experiences of the past - and where I think it can be useful, I will give examples to people, particularly my colleagues"*. This example highlights the potential role of IF ability, through employee experience, in facilitating the development of others in the workplace, and seems pertinent to practices aimed at development and

knowledge sharing in organisations (Aklamanu, Degbey, & Tarba, 2016). The relationship of past experience to these perceived contributors or outcomes of IF is shown in Figure 4.4:

Figure 4.4 Implications of Past Experience to IF ability
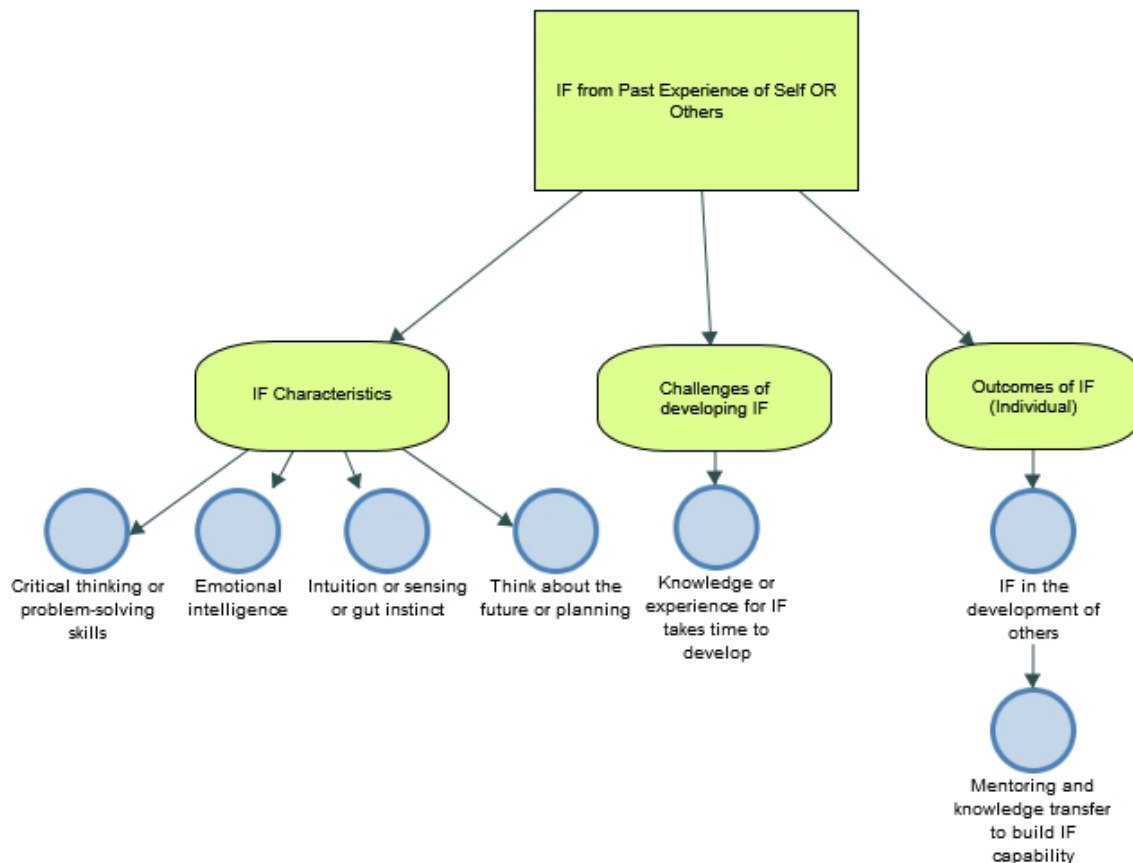
4.3.2. IF Characteristics

Although some sub-themes of IF Characteristics featured above in the discussion of past experience, each of the sub-themes here were established as important to the individual characteristics associated with IF ability in their own right – and are thus discussed further below. Figure 4.5 displays the ten characteristics identified by the HRM professionals as important to the IF process. Each sub-theme will be explored below.

Figure 4.5 Sub-theme IF Characteristics (and associated sub-sub-themes)
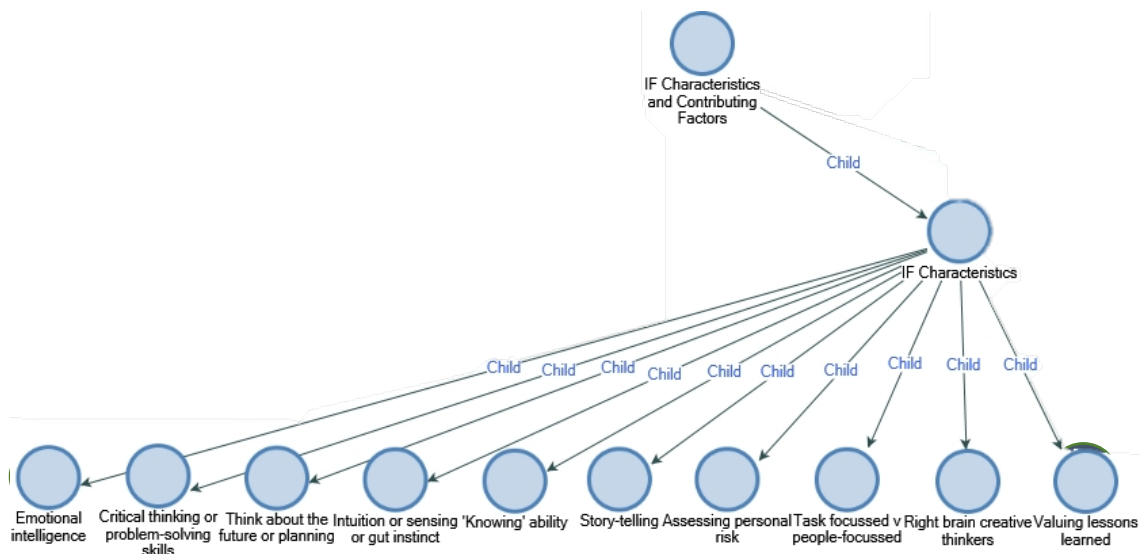
4.3.2.1.   Emotional Intelligence

Phase One participants referred to employees' emotional intelligence as contributing to IF ability, as explained by Natalie *" …it's about being able to read your people… being emotionally aware and reading the people around you.".* Emotional intelligence is well documented as being an important aspect of leadership and decision-making (Alzoubi & Aziz, 2021; Hess & Bacigalupo, 2011). While its role in IF is less understood, Phase One participants have indicated that both emotional intelligence and the impact of IF on decision-making (a sub-sub-theme of the second sub-theme 'Outcomes of IF' explored below) are of interest and value to their organisations. Given IF involves a process of cognition, ultimately leading to decision outcomes, understanding how emotional intelligence is involved in the procession of IF ability will be valuable for work outcomes.

4.3.2.2.   Critical Thinking

Along with emotional intelligence, references to employees' critical thinking skills were made frequently by participants, such as, *"It's critical thinking skills… I've got people who have really strong critical thinking skills… for that reason, they're really good."* (Natalie). Given the role of analysis and interpretation in the foresight process, and the influence of thinking and emotional intelligence in decision-making (Moon, 2021) this observation is not

surprising. However, critical thinking is expected to emerge as a common characteristics of IF, and it will be interesting to understand how big a role it plays in IF outcomes.

4.3.2.3.   Thinking about the future or planning

Significantly, all six HRM professionals referred to the tendency of those with IF to think about the future as might be expected in a study about foresight. Reflecting on the presence of 'thinking about the future' in the psychology literature, this finding was consistent with Kliegel et al.'s (2000) discussion about the role of prospective memory in planning daily activities. Participants described employees in their organisation who had this tendency:

> *"They're ambitious. They have ideas. And they have foresight. You know,*
> *they can see how companies are going to progress. They're watching.*
> *They're watching the environment. They have the capacity to draw on lots*
> *of stuff and come up with ideas." Katherine*

As mentioned above for past experience, future thinking often featured in discussions about past experience (self and others') in relation to IF – indicating (as per Tulving's work) that one memory system (imagining) relies on the other (remembering) in foresight. The analysis also highlighted that participants who spoke of future thinking also referred to the development of others – in terms of encouraging colleagues to think about the future. One example included below, highlights the potential role of future thinking ability in developing and nurturing foresight capability in teams – and important consideration for organisations seeking to build knowledge competence in their workforce.

> *"But what they [the team] then learn is they learn the nuances, or they can*
> *develop foresight around the operation of three [places], not just one… so*
> *that's this - taking that individual level - and trying to roll it up one right?"*
> *David*

4.3.2.4.   Intuition

Considered an important component of IF by participants, intuition has been defined as '…rapid, affectively charged judgements arrived at without conscious awareness of the reasoning processed involved' (Sadler-Smith, 2008, p. 494). Whilst all participants referred at some stage to an intuitive or 'gut-feeling' type of sensation that influenced their decision-

making, the clearest recollection of this came from Samantha as she reflected on a dramatic issue affecting her workplace:

"… when I stood back from it… it was all about intuition… it was almost like a twitchy nose thing… but it's more than intuition… it is about drawing on what I've seen in the past… It is actually literally a very deep gut feeling…"
Samantha

Pertinent to the discussion of intuition and its role in foresight, Dane and Pratt (2007) distinguishes between 'intuiting' and 'intuition' – the former relating to 'nonconscious information processing' (p. 3) and the latter as the 'consciously registered outcome' of that process. *Samantha* continued her dialogue to describe her ability to work across various industries and use her experience to *'intuitively know what will work'* due to her past experience. Samantha's recollection of her experience, and attribution to intuition in assisting her in a new situation, implies that intuition and her previous knowledge and experience played an important role in her ability to foresee a very serious situation in her workplace. Recalling the role past experience plays in IF (i.e., *remembering* by drawing on the episodic memory system) intuition is likely to be an important factor to consider in IF ability or outcomes.

4.3.2.5. Knowing ability

Although only described by one of the six Phase One participants, the theme of knowing was persistent throughout *Karen's* reflections, *"… it's a knowing. I just know, and it's not because it's logical and it's not because it's a motive. It's just because somewhere deep inside me I just know."*. The phenomenon of knowing is associated with memory systems in the brain and the recollection of past experience**.** The researcher felt it important to maintain this sub-theme as a separate item considering chapter two insights about autonoetic or *self-knowing* consciousness. As Wheeler et al. (1997, p. 335) explain, autonoetic consciousness enables individuals to project 'their own existence into the future, and to reflect about what [their own] experiences might be like at a later time'. It should also be noted that knowing was also discussed in close context with feelings associated with intuition as evidenced in *Karen's* accounts below:

> *"But I bring that and I always touch my stomach when I think about it and I don't know why - it's like a deep **knowing**. I bring that to decisions now…."*
> *Karen*

The phenomenon of knowing, its relationship with intuition, and its positioning in the literature in autonoetic consciousness, seem crucial considerations of IF ability and emphasise the potentially critical nature of organisationally relevant knowledge and experience to positions requiring IF.

4.3.2.6.   Storytelling

Storytelling emerged as a way in which employees either develop their own foresight through a process of reflecting with others or share their past experience and foresight with others. It was an intriguing aspect to emerge from the interviews and one that Anna captured in terms of its multi-faceted nature:

> *"… he draws on his past experiences… He is always reflecting on a story, where he worked in the past, and so on, which I think is good for his own internal thinking, and strategizing… always, there's a learning." Anna*

In addition, *Karen*, viewed the sharing of experience and stories as a sign she could *'trust'* the person's past experience – indicating that storytelling may play an important role in the perceived integrity of an employee's recollection of past experience – possibly leading to greater influence when in a mentoring or collaborative learning role:

> *"So, she would say, 'I know what customers are like - customers want this. I know that if we reduce the average handle time, it'll save us this.'… So she used to use those stories… which would stop you debating it - because she knew it." Karen*

Storytelling may play a surprisingly valuable and far-reaching role in organisations in terms of employee knowledge-sharing. This could be crucial in the development of IF ability and will be interesting to observe in terms of whether it appears in the Phase Two interviews as a feature in organisations.

4.3.2.7. Assessing personal risk

The phenomenon of risk-taking was an interesting sub-theme to emerge in 'IF Characteristics'. It referred to the tendency for a person to assess their personal risk when making a decision about whether to act on their IF:

> "... I never do anything, anything workwise or personal wise, where that's going to have any sort of major impact for the future. So many people would look at me and say, I'm a great risk taker - I'm a great gambler. I'm exactly the opposite!" Samantha

Personal risk assessment and decision-making have been associated with emotional intelligence (Moon, 2021) (another IF characteristic) - which could prove important to the IF process. In terms of significance to IF and organisations, there are two points to consider. First, the potential benefits of IF outcomes could be negatively impacted if an employee chose not to act on their IF owing to too high a perceived personal risk. Secondly, organisations can establish a risk-taking tolerance to encourage creativity and innovation in their organisations (Hock-Doepgen, Clauss, Kraus, & Cheng, 2021) – which could influence IF behaviour. Related to this issue, trust emerged as a sub-sub-theme of 'Challenges of developing IF' (examined below) at the organisational level. The level of trust of organisations could indicate the potential influence of organisational-level risk-aversion or acceptance of IF behaviour and would be an important consideration for organisations wishing to foster IF behaviour.

4.3.2.8. Task-focused v. people-focused

In terms of the significance of whether employees were perceived as task- versus people-focused, HRM professionals felt that employees who were more people-focused were more likely to think about the future, and the consequences of their actions, than those focused on immediate tasks. Anna's comments exemplified this:

> "[ ] people tend to be either more task or people focused. And when they're task focused, they want to fix things [ ] Whereas if people have that higher level of people awareness, and are more relational, I suppose in how they conduct their business...they tend to think more broadly about the future, the impacts, etc." Anna

Emotional intelligence was also associated with people-focused employees and their IF ability according to two of the HRM professionals. This supports the general perception of HRM professionals that employees with more emotional intelligence and a people-focus are perceived as having good IF ability. Given the focus of emotional intelligence on empathy, as well as self-awareness and self-control of emotions (Goleman & Boyatzis, 2017) when working with others it is not surprising to consider that emotional intelligence featured in discussions about people-focused employees. It will be interesting to observe if these features of IF emerge through experiences of employees in Phase Two.

4.3.2.9. Right brain creative thinkers

Katherine was the only participant who referred to those with foresight as having "right brain" thinking. This observation was of interest to this study given previous research by Graetz (2002) related to the role of right-brain thinking in "creative, inquisitive, intuitive, entrepreneurial" strategy-making in organisations, as well as the importance of emotional intelligence in leaders to stimulate this type of strategic thinking (p. 460). The researcher anticipates it will be difficult to determine right- versus left-brain thinking in Phase Two participants, however, references to creative thinking may support this observation from *Katherine.*

4.3.2.10. Valuing lessons learned

The final IF Characteristic sub-theme refers to the phenomenon that employees who value lessons learned develop IF ability. *Karen* described this in terms of her own personal IF ability:

> *"…every time I've learned… I learn when I jump off things... I've also learned how to do it differently next time. And one of the things that I think foresight creates for me as a leader is… a little bit more lessons learned and a little bit more ability to try a different approach…" Karen*

Given the findings around the importance of past experience to IF – and the fact that learning, particularly experience-based learning, is facilitated through personal past experience (Andresen, Boud, & Cohen, 2020), establishing the importance of lessons

learned with employees could be important for developing IF. There are also obvious implications here regarding employee knowledge and experience too.

These findings have now summarised the two sub-themes of our major theme "IF Characteristics and other contributors" – *Past Experience (from self and others')* and *IF Characteristics.* The final sub-theme to be explored in terms of the first major theme is *Reflection*.

4.3.1. Reflection in IF

Reflection incorporated two main sub themes: *time taken in [the] process equals foresight* and *reflection as a foresight activity* (see Figure 4.6). These two sub-themes remained prevalent throughout the HRM professionals' interviews. *Natalie* expressed the perceived value of reflection to IF ability, *"The people that are effective… they make the space and the time to actually consider it [foresight] and unpack what worked well, what didn't work…"*

Figure 4.6 Sub-theme of Reflection in IF
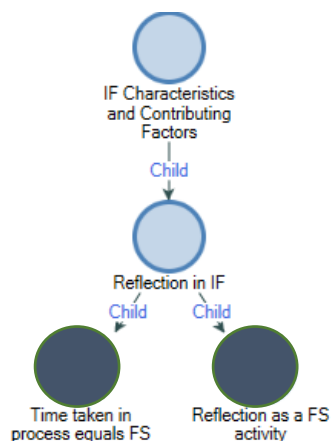
The importance of reflection was evident in the foresight literature, where IF ability involves humans reflecting on previous or current situations to remember, imagine and mentally project themselves into the future. Schön (1991) describes the benefit for managers in understanding their actions in the moment and conveying this understanding to others through a process of *reflection-in-action*. In terms of IF ability leading to development opportunities in organisations, the process of reflection seems critical. Phase

Two aims to establish the role of reflection in IF ability, which is important given the importance HRM professionals placed on reflection as a foresight activity in their workplaces. When asked what might foster foresight in their organisation comments included:

"It's critical thinking skills, and then reflection time… if you don't force them to do that, they just won't do it, and they won't learn.". Natalie

"I would actually like to say a whole lot of evaluation, reflection, and those sorts of things. I'd like to see…that people are encouraged to sit and reflect on what worked, what didn't work, and how they might need to change."
Samantha

Several other sub-themes or sub-sub-themes of 'IF Characteristics and other contributors' emerged as important and associated with reflection in IF**.** For example, Storytelling (from sub-theme IF Characteristics above) was a prominent feature reported by participants when discussing reflection, either as their own way of sharing past experience or the storytelling observed in others seeking to impart their past experience to develop colleagues' IF (i.e., mentoring). *Anna* reported *"He is always reflecting on a story…because [he] want[s] me to think about what this looks like in three months' time."*.

When listening to participants describe a process of drawing on their past experience to work through a scenario, elements of brainstorming (idea generation) or critical thinking featured in terms of developing critical thinking skills. *Karen* explained a situation where there might be gaps in her own knowledge that can be filled by others: *"If I think about what I want to do, it's almost like pieces of puzzles…however, there will always be blanks in it…so I would go right, I need someone who knows these things…"*. Karen's explanation brings together the observations made about the past experience of self or others playing a key role in the IF process. This could be significant in terms of the potential role of networks or collaboration in IF – and will be of interest in Phase Two. Whilst each of the sub-sub-themes discussed (storytelling, brainstorming, past experience, and critical thinking) are observed as important to the reflective process; a number of other interesting observations relating to IF ability and the role of reflection were evident.

Time taken to reflect (a major sub-sub-theme of Reflection in IF) was a common thread amongst participants, with short-term (could be seconds in a meeting), or long-term (days to gather information and talk to contacts) reflection, a possibility. For example *Natalie* reported that employees who were *"most effective at it [foresight]…made the space and the time for consideration…they thought and considered before action…"*; whilst *Samantha's* response implied a benefit to making time to reflect after the event (i.e. reflection-on-action): *"…I'd like to do a lessons learnt…I think that would formalise your foresight…bring them from the subconscious into the conscious with people"* – she continued to explain that this process would enable employees to *"draw"* on those lessons when faced with a similar situation in the future. *Karen* also highlighted the importance of taking time for reflection: *"I've become…more of a thinker from a time perspective, because I know that it takes time to make sure you've ticked all your pieces of a puzzle."*. Often in the process of longer-term reflection, implications can be either the development of IF in others (particularly when a person with IF recognises a knowledge gap and draws on their own network to contribute); or the development of a plan – resulting from the reflective process. The role of time and reflection in IF ability may determine the importance of how organisations prioritise work design and foster activities to facilitate a process of reflection in work and encourage employee development, planning and potentially better outcomes for work through enhanced IF ability. In addition, temporal preference was identified in the literature as relevant to the foresight process in organisations (Conway, 2022), thus further investigation regarding how employees temporally experience IF will be insightful.

Finally, when considering the development of IF for individuals or organisations – one of the outcomes regularly raised by participants was learning. Participants reported learning in many different contexts: as an outcome of storytelling – *"Always, there's a learning"* (*Anna*); as an outcome of sharing personal experience – *"he's utilised his innate knowledge of the network…and its operation that he's gathered over 30 odd years at an individual level…to significantly contribute..."* (*David*); or as a result of formalised reflection activities – *"So next time when they're confronted with a similar situation they can actually draw on that and say, you know, I learned that lesson there…lessons learnt is a seriously great way of formalizing that foresight…"* (*Samantha*). Importantly, HRM professional perceived that

learning occurred at individual and organisational levels. Individually, participants referred to their own reflective practices resulting in the development of a plan or some type of conceptual map to guide future actions:

> *"So that whole process is considering how people are going to react, good, bad, or indifferent [which affects] your implementation plan…"* Natalie

Alternatively, participants described employees with IF working with others (mentoring) in understanding a current scenario to influence future outcomes.

> *"…someone like Peter… with his innate knowledge of the network…[is out on the ground] and there's a group of engineers on a whiteboard drawing [up his knowledge]… that's a good example of where he's utilised his knowledge… to significantly contribute [to others]"* David

The role of reflection in IF and its importance to development and knowledge in organisations will be further considered following the Phase Two data analysis.

The intention of Phase One is to understand *how HRM professionals understand and construct the value of IF, and practices utilised to identify IF ability, with their organisational contexts.* Section 4.3 has examined the "Perceived Characteristics of IF". Section 4.4 will report the findings and perspectives gained about the perceived challenges of IF in the HRM professionals' organisational realm.

4.4. HRM professionals' perceived challenges of developing IF in their organisation – major theme 2

At the top level, there were two major sub-themes of "*Challenges of Developing IF*" which polarised into *organisational-level influencing factors* and *employee-level influencing factors*. Interestingly – and perhaps due to their roles as HRM professionals at heart of guiding organisational culture for their businesses - the HRM professionals tended to discuss organisational-level contributing factors for IF in a negative way. They positioned many of these factors as challenges that needed to be overcome in order to develop IF in their organisations – thus the emergent major sub-theme title *"Challenges of Developing IF"*. Organisational-level factors will be summarised first, followed by the employee-level factors HRM professionals perceived as being a challenge for developing IF ability.

4.4.1. Organisational-level influencing factors

Five sub-themes emerged as relevant to presenting challenges for developing IF (2) at the organisational level (See Figure 4.7). These included:

- *Culture of the organisation influencing the use of IF*
- *Job Role influencing the use of IF*
- *Resourcing influencing the use of IF*
- *IF is difficult to define, measure and/or identify in employees*
- *IF dependency is a risk to the organisation*

Figure 4.7 Challenges for developing IF - Organisational-level influencing factors
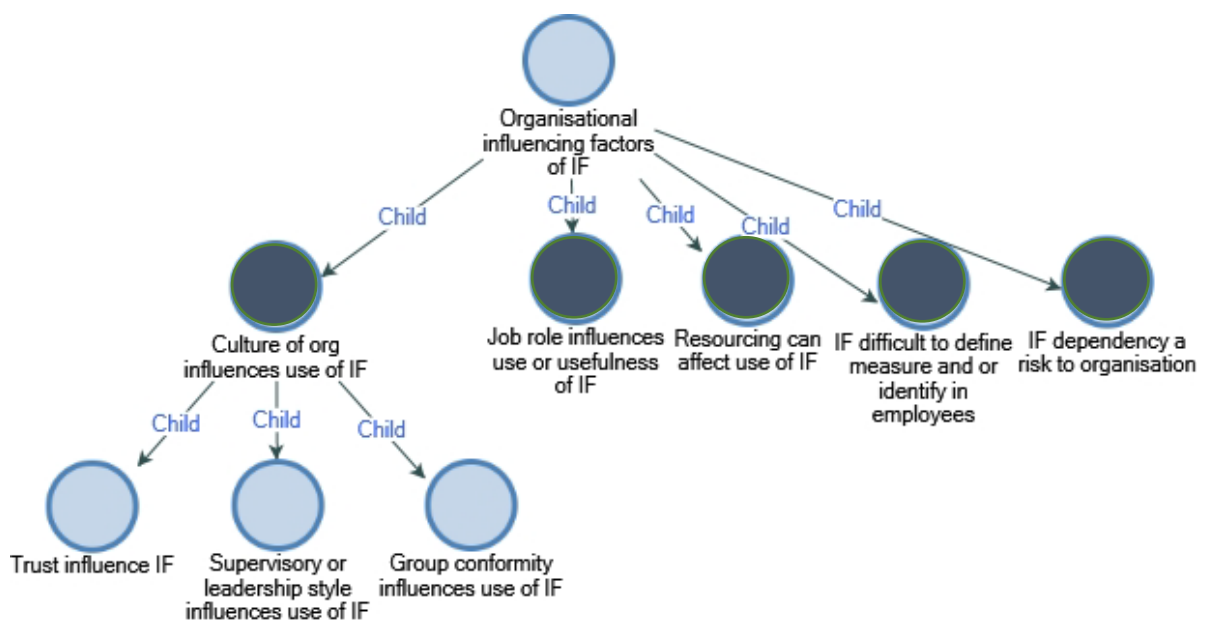
The most prevalent issue regarding the perceived challenge of developing IF in organisations was the issues of organisational culture, which comprised three sub-sub-themes: Trust influencing IF, supervisory or leadership style influencing IF, and group conformity influencing IF. Findings for the five sub-themes highlighted in Figure 4.7 will now be presented.

4.4.1.1. Culture: Trust, supervisor/leadership influence and group conformity

By far, issues related to culture dominated the content from interviews when discussing influencing factors of IF challenges in organisations. The category of culture in the

context of how employees engage with IF was defined as any reference by participants that described their or others' perceptions of culture that influence IF such as the level of trust of employees by their employer, the supervisory or leadership style they received, and the pressure for group conformity that may exist in their organisation. The following excerpt describes the potential influence of culture on an employee's likelihood to either use or display IF – particularly when there is a lack of trust in employees to perform their job adequately.

> *"… a lack of trust in people… and people… therefore can't exercise their brains as much as what we would like them to be able to… we tell them to do 'that' but then we don't allow them to do it, which creates this kind of, you know, duplicity in the place." David*

This lack of trust was also reflected in the general risk-averse and bureaucratic nature of culture in *David's* organisation, which was perceived as impacting the ability for employees to use their IF ability or exhibit IF behaviour, as described below:

> *"… they can see an obvious fix in front of them… but they've got to go through this process to get stuff approved to do it… which do[es] stifle the use of foresight." David*

Of further interest to the researcher, is the role of leaders or supervisors in fostering a certain culture in the workplace. Every Phase One participant mentioned the potential influence of supervisory / leadership style over the way in which IF was experienced by employees. Natalie described her view of why an employee may lack foresight, *"And sometimes it's because it's the way they've been managed or how their leader has interacted with them. They've never been asked their opinion before."*.

Studies focused on the relationship of management style, culture, leadership and decision-making continue to attract attention in organisational literature (Al Khajeh, 2018; Sulich, Sołoducho-Pelc, & Ferasso, 2021) and are anticipated to be helpful in understanding the relationship of these factors to IF ability in organisations.

Similar to the prevalence of research around culture and leadership style, the issue of group conformity and its influence on decision-making is well-documented (Constant, Ramstead, Veissière, & Friston, 2019; Tolbert & Darabi, 2019). The researcher expects to see

reflections shared by Phase Two participants that confirm a potential reluctance, or similar issue, in using their IF depending on the contextual situation in which they find themselves. While *Katherine* was the only participant who raised the issue of conformity in Phase One: *"I think foresight and groupthink is also - there's also a correlation there… groupthink can absolutely stifle the foresight of individuals by that group pressure."*, the increasing interest in teamwork in organisations (Tripathy, 2018) and perceived impact of teamwork on employee wellbeing (Ogbonnaya, 2019) substantiate an interest in the potential influence of group conformity on IF.

4.4.1.2.   Job Role

In addition to culture, different industries, levels, and roles inside organisations indicate the ubiquitous nature of IF across job role. For example, *Anna* referred to IF being *"valuable"* to the role of General Manager, while *Katherine* emphasised the importance of IF to *"sales and marketing"*. In contrast, *David* referred to the value of experience of crew members in long-term service to be able to *"identify where things might…be and how you might fix things"*. It is anticipated that Phase Two interviews, with emphasis on the lived world of employees in organisations will shed light on the issue of job role and its relationship with IF. It will be important to understand if certain job roles required more IF than others, or if all job roles require IF and if so, is the nature of IF similar or different.

4.4.1.3.   Resourcing can affect use of IF

The concept of resourcing, or in this case limited resources, having a negative impact on employee foresight was intriguing. *Katherine* raised this issue while reflecting about IF in employees – when she described how one of her employees had great foresight and had predicted *"two potential train crashes"*, but that his foresight didn't lead to stopping the *"train crashes"* because the organisation was *"under resourced"*. When the researcher reflected on this comment in Katherine's transcript, although the only participant to raise the point of resourcing, the potential detrimental effect of outcomes for individuals and organisations regarding resource-deprivation of valuable and important IF insights was deemed important.

4.4.1.4. Difficulty defining and measuring IF

One obvious challenge for HRM professionals considering the development of IF in their organisations, was the relatively unknown nature of IF, and the consequent difficulties in knowing how to define and measure the phenomenon of IF in their employees. This issue has obvious ramifications for the practical implications for HRM professionals hoping to source employees with IF or utilise and/or develop IF in their existing employees. *David* shared his view that *"foresight is probably a differentiator"* in terms of people's capacity, but then continued to explain that they currently don't have a "*psych profile tool"* that they use to identify IF in selection. *Katherine* took the discussion about the challenge of defining or measuring foresight further by explaining she had *"never put the word foresight in an ad [job advertisement]"* in her life, but she *"might do so today"* – but the challenge she identified was:

> *"How do you know that somebody is going to have foresight? When I'm doing my selection criteria - Give me an example of foresight? Or in behavioural interviewing, can you give me an example of foresight?"*

Instances of confusion by HRM professionals around how to define or measure foresight demonstrate to the researcher the value of the current study. While Section 4.7 below discusses HRM professionals' views about HR practices related to IF in organisations, it is hoped that the outcomes of this study will contribute to ways in which HRM professionals can identify, measure, and develop foresight in their organisations.

4.4.1.5. IF dependency a risk

One interesting outcome from discussions about the role of knowledge and experience that contribute to IF outcomes, is the concern about the *limiting* factor or risk to the organisation – that past experience and knowledge could play when influencing an employee's IF. Although discussed by only three of the Phase One participants, the researcher felt it was an important and surprising negative aspect of IF to explore - in terms of the potential negative role IF could have on employee decision-making and work outcomes. *David's* explanation highlighted this issue – that "… sometimes if people become so focused on what happened before - it can cloud their view of the future… so it has a

double-edged sort of sword to it.". *David* also discussed a scenario where the business was too reliant on the past experience and knowledge of one key long-term individual – rather than a team of people with similar knowledge, *"… operationally, it's actually a risk for us, that we're reliant on one individual to [have foresight]"*. The researcher felt this would be an important aspect of IF should it emerge as an outcome of Phase Two.

The final sub-theme related to 'Challenges of IF' in terms of developing IF in organisations, is *employee-level influencing factors*. While the HRM professionals were ideally positioned to discuss contextual factors that they felt related to foresight in their organisations, interestingly, participants also turned the foresight discussion to themselves. They shared views about their own use of IF (and others) at a very personal level, and how this was manifested or experienced. The following section investigates Phase One participants' perceptions of individual-level influencing factors that contribute to the "Challenges of IF" – or developing IF in organisations.

4.4.2. Individual-level influencing factors

At an individual level when discussing foresight, HRM professionals reflected on employees they felt had IF capacity, and others they perceived did not. Five sub-themes emerged from the discussions around individual-level influencing factors including:

- *Employee doesn't have IF*
- *Employee is reluctant or struggles to use IF*
- *IF as innate in some and not in others*
- *IF is limited and needs to consult others*
- *Knowledge or experience for IF takes time to develop*

Figure 4.8 provides a visual representation of employee-level sub-themes that present challenges for developing IF (2) in organisations. Each of these sub-themes will not be explored in terms of findings for the study.

Figure 4.8 Challenges for developing IF - employee-level influencing factors
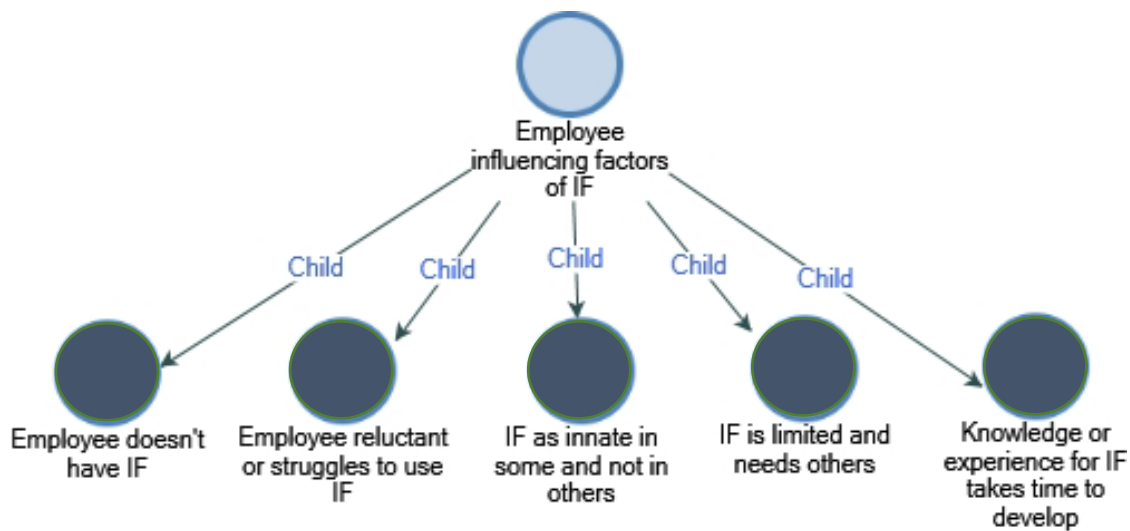
4.4.2.1.   <u>Employee doesn't have IF or Employee is reluctant to use IF</u>

Participants discussed how some employees dd not seem to have IF while others had IF ability. *Anna* spoke of how some employees are able to work with a number of factors to understand why a situation is *"going poorly"*. She referred to those with IF as having *"the ability to pull those connections together"* and mentioned that others do not seem able to do this. *Natalie* expressed a similar understanding about employees who she felt she always had to *"prompt"* – while others she felt *"are always consciously thinking about it* [foresight[*"*. *David* described that some employees *"have more of an aptitude for it or are better able to demonstrate it."*.

Several interesting associations came from these reflections. When *Karen* expanded the discussion of ability, she suggested not all employees appear to use IF even if they may have IF ability – because they are content being followers. This related to other references about how some employees are reluctant to use their foresight. Comments were observed covering aspects of culture (stifling their ability to use IF), personal disposition (being self-consciousness or having a sense of lack of acknowledgement), and a lack of autonomy, encouragement, respect, or trust - as highlighted by *Natalie*, "…no one's ever treated them with that level of respect and consideration… no one's ever treated them like they're an

individual who has value to offer.". These issues point to the potential role of leadership or supervisory style, and culture, influencing IF outcomes (discussed in Section 4.5 below).

4.4.2.2.   IF is limited and needs to consult others OR IF takes time to develop OR IF is innate

The previous reflections highlight several interesting cultural and supervisory or leadership issues that could influence the overall effectiveness of IF in organisations. These issues are distinct from other conversations where, for example, IF is limited and needs others, or that knowledge and experience for IF takes time to develop, or that IF is innate in some employees but not in others. *Karen* spoke of her own experience when she doesn't *'know'* something related to her work and can't fill the *"puzzle"* without the missing pieces and calling on others, *"So there's things like I didn't know… So what I would do in that is go right, I need someone who knows these things… then I got an expert in who knew… "*. This may indicate the importance of opportunities for collaboration in organisations. It was interesting to observe that *Karen* has extensive career experience behind her yet was willing and able to accept where gaps in her own experience and knowledge limited her ability for IF in her work.

Of significant interest for IF in organisations, is the paradox that exists between the need for knowledge and experience that seems to play an essential role in an employee's IF, and the risk, identified earlier, to the organisation of individual employees possessing this knowledge and experience. Consideration should be given to the role of knowledge management (KM) and sharing for the development of newer employees who may not have the benefit of long-term knowledge and experience with the organisation. *Natalie* referred to this quandary when reflecting on the role of experience in the development of IF:

> *"You can't really give someone lived experience… if you explain it in a way,*
> *that is emotive enough… they can relate and connect to you translating*
> *that past experience… But other examples might be more challenging…"*
> *Natalie*

Phase Two may shed light on the importance of knowledge sharing in the development of IF in organisations. The final theme to be explored for Phase One is "Outcomes of IF" in terms of HRM professionals perceived value of IF to their organisation.

4.5. HRM professionals' perceived outcomes of IF – major theme 3

The emerging sub-themes for *Outcomes of IF* (3) importantly featured:

- *IF in influencing others*
- *IF in the development of others*
- *IF in the change process*
- *IF in the decision-making process*
- *Perceived negative implications of IF in individuals*

Figure 4.9 highlights the five sub-themes of *Outcome of IF* (3) conveyed by HRM professionals. The findings will now highlight the significance of these themes for IF in organisations.

Figure 4.9 Theme 3 - Outcomes of IF
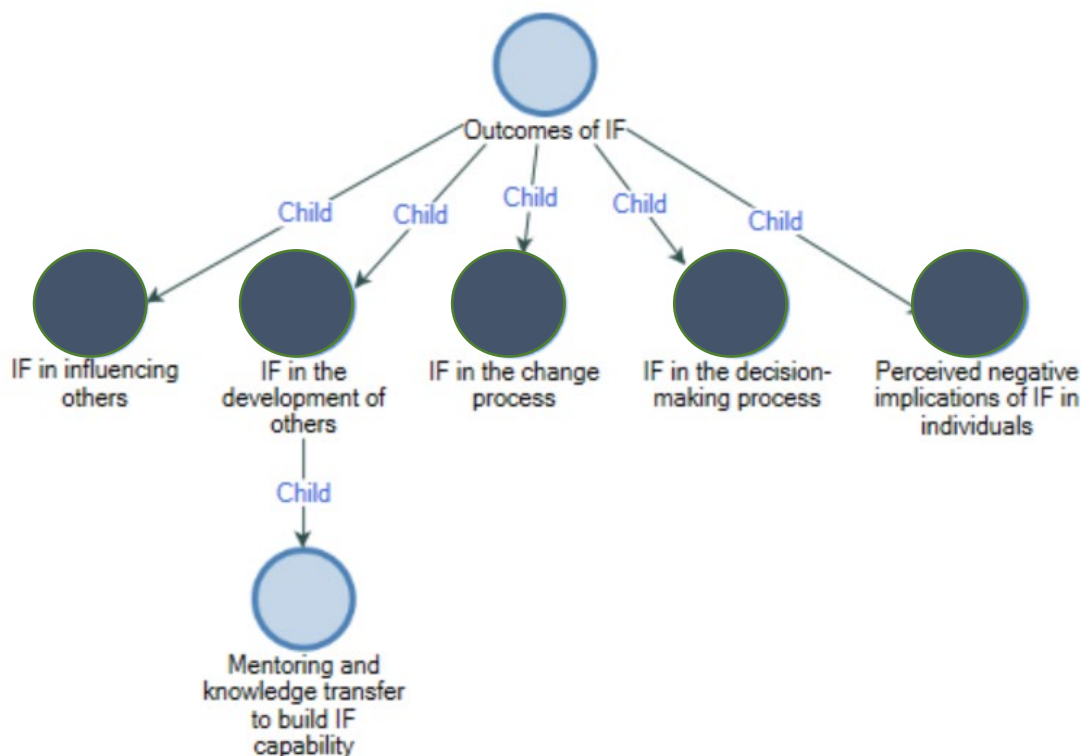
4.5.1. IF in influencing others

An interesting application of IF was the concept of using IF for influence. Participants discussed how IF (either their own or others') is used to influence others in their organisation. *Natalie* described this in the context of what she felt made employees

effective in their work, *"So that whole process is considering how people are going to react, how you can utilize those individuals to then influence others…".* Karen reflected about the influence of a colleague who she felt had good IF *"capability"* based on past knowledge and experience and used it to bring about organisational change (discussed below) and / or to influence the actions taken by the business: *"… she would go 'based on my past experience, I want it to look like this… so the solution is' - so we saved millions and our customer service went up 27% or something!".* In terms of significance in organisations, those with IF ability may be positioned strategically to negotiate and influence important decisions for their role or the organisation – utilising their IF ability.

4.5.2.   Development of others

Perhaps the most poignant discussion in interviews regarding the outcomes of IF (3) was that HRM professionals felt that either their own, or another employee's IF, contributes to the development of others in their organisation. This ability to develop others with one's own IF again called on the storytelling capacity of employees, and was described by Anna - who explained, *"I'm drawing a lot on the stories of the past and the experiences of the past, and where I think it can be useful, I will give examples too…".* For *David*, an existing awareness of the value of sharing knowledge and experience through mentoring was reflected in their expectations of longer-term employees to participate in a mentoring program: *"[they have] a role in mentoring training… we might put them in, we've got a couple of them doing the Cert four xxx. And they're going to do delivery of the xxx training.".* Although this study does not aim to measure outcomes of IF, the perceived role of IF in development and knowledge-sharing would be an important outcome of Phase Two.

4.5.3.   Change process and decision-making

Although more challenging to capture in short quotations for the purpose of this chapter, most participants described change scenarios where they felt outcomes were associated with their own IF and/or how they used their IF to manage a change process. For example, *Karen* had worked extensively managing change programs and talked about how her past knowledge and experience, although not always directly related to her current projects, helped her understand *"what doesn't go well [ ] what does go well"*; she also

described her tendency to draw on a large network of people she utilises to fill the gaps in her own knowledge - as described previously. Often, the descriptions from participants in change situations also provided insight into the outcomes of IF (3) for decision-making as well. *David* described a high-level enterprise bargaining process he had managed where his decisions required him to *"draw* [on] *the experience of the distribution managers [to] glean how the bargaining process had unfolded previously"* and to determine, using his IF, *"what were the key issues that the unions were looking for… and then how might that then transpire going forward?"."*. Again, measuring the impact of IF on change programs is beyond the scope of this study, however, it would still be valuable to understand if IF is utilised by employees to manage change in their jobs – as this would establish the importance of IF in the change process.

4.5.4. Negative implications

Whilst IF in general was spoken about in terms of its benefits to individual work or organisational outcomes, at times participants provided interesting insights about how IF they perceived IF could have negative implications. For example, as mentioned previously, the organisation could come to depend on employees who develop IF through longer-term employment and valuable organisational knowledge and experience. In addition, *Anna* mentioned that storytelling and its role in sharing or developing an individual's or others' IF, might be viewed as a negative implication of foresight by some members of the organisation: *"…he draws on his past experiences… he is always reflecting on a story [and] it can be an issue for people around him [who are] thinking "Oh, here we go again, this is a story about whatever"."*. The concern regarding over-reliance on certain members of organisations possessing IF over others seems legitimate reason to acknowledge there may be negative implications associated with IF ability in organisations. Phase Two data collection will provide an opportunity to explore this issue further given the perceived risk of this implication for organisations, as raised by the HRM professionals.

Phase One data collection has thus far provided rich insights into the world of IF in organisations from the perspectives of HRM professionals. The research design of Phase One adopted a GT approach which has facilitated contextual discussions throughout the

interview process. Beyond exploring factors that contribute to IF, and the potential outcomes of IF for organisations and employees, the HRM professionals were also prompted to discuss any existing HR policies and practices that may be related to their current understanding of how they define, identify, and foster IF in potential incumbents or employees. The results of these discussions reflected a strong desire for HRM professionals to know more about IF, and a general lack of knowledge or direction about how they currently harness IF in their organisations. Results are presented in section 4.6 below.

4.6.   HRM professionals' understanding of, and associated practices for, IF ability – major theme 4

Findings for the final emergent theme for phase - HRM practices utilised for IF ability - are presented below. These findings are followed by a summary of the Phase One research, a response to research sub-question one, and then preparation and insights for Phase Two (see 4.6.2).

4.6.1.   HRM Practices for IF

It was challenging for HRM professionals to discuss existing HRM practices related to IF, as in all cases, responses were based on ways in which the HRM professionals perceived they *would* measure or *have* measured IF, given it was not an ability they had consciously looked for in incumbents in the past. Results indicate the selection strategy most indicative to them of testing for IF ability is the current use of behavioural and situational interview questions (see 4.6.1.2 below). However, limited other practices were identified by HRM professionals throughout their interviews in terms of how they perceive they may identify IF ability in their employees. Figure 4.10 shows the three major categories in which HRM practices were identified in the data, with details discussed below.

Figure 4.10 HR-related practices for IF
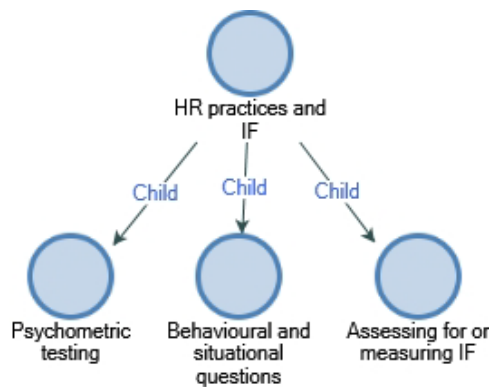
4.6.1.1.   Psychometric testing and IF

The use of psychometric testing was conveyed by *Anna* as a common measure among HRM professionals seeking to understand such abilities as emotional intelligence, verbal and abstract reasoning and numerical literacy, which she perceived as relating to IF. However, although *Anna* identified these as the current practices the organisation employs, she also explained that these tests had failed in in the past, in terms of identifying two factors she considered important: *"leadership ability, and more specifically foresight"* and that, reflecting on a previous incumbent they had recruited, although successfully making it through the selection process, *"they were shocking"* at these two factors. Although only one participant referred to the potential use of psychometric testing to help identify IF in employees, *Anna's* explanation highlights the limitations of such measures in potentially predicting IF ability.

4.6.1.2.   Behavioural and situational interview questions

Another way in which HRM professionals sought to identify IF qualities (in terms of their understanding of IF from the definition provided by the researcher) was through the use of behavioural and situational interview questions during the selection process. Nearly all of the Phase One participants acknowledged that this might be one way to get close to IF ability in their potential employees, and it was quite insightful to hear how they explained what they were looking for, but couldn't actually label the phenomenon of knowing a person could think about the future when undertaking their work:

"… where you use behavioural questioning, and then, you know, that person demonstrates through giving you the example that they're able to connect a whole range of things that are going on, to make a decision or to inform a situation or whatever…" Anna

It was interesting to note other ways in which HRM professionals perceived they might be able to measure IF moving forward, and with a new focus on the phenomenon.

4.6.1.3.   A combination of other possible measures

Participants suggested other ways in which they might have assessed or consider assessing or measuring foresight in the future. Answers varied from *"gut instinct"* (*Anna*) to testing for *"planning and visioning"* (*David*) - but only for executive roles, to searching for *"more creative people"* (*Katherine*) and finally, to simply encouraging incumbents to *"share their past experience"* (*Natalie*). *Samantha* explored her own reasoning for asking about *"past experience"* as follows:

"I was looking for people with past experience. But what I probably didn't formalise in my head was -well - why is past experience so important, because the past will predict the future in a lot of ways. And, and so the unspoken, I suppose for me, now I look back, and it was, if these people have experienced it before, they will know what to do in the future."
Samantha

This explanation was quite profound in terms of the objectives of this study to understand IF, and also that *Samantha* talked about past experience being able to *"predict future behaviour"* and show us that people *"know what to do in the future"*.

A response to the research sub-question one is presented next.

4.6.2. Response to research sub-question one

Phase One of this study sought to answer the following research sub-question:

How do HRM professionals understand and construct (implicitly and explicitly) the value of IF, and practices utilised to identify IF ability, within their organisational contexts?

Chapter 4 has thus far presented the findings of HRM professionals' current understanding and value of IF in their organisations. Considering that IF is not yet a formalised construct recognised by HRM professionals, the reported practices associated with IF were limited from the Phase One interviews. However, HRM professionals showed a genuine enthusiasm and were actively engaged with the concept of IF and conveyed their perceived value of foresight for employee performance and outcomes during interview discussions. HRM professionals demonstrated some knowledge about their employees having or using IF, but they weren't able to elaborate about how they might identify, develop, and measure it. This gap in HRM professional knowledge revealed a need for research and understanding of IF as part of a wider HRM architecture, providing a good justification for this research.

In response to RSQ1 a summary and discussion of findings from Phase One is presented below. Figure 4.11 presents the broad emergent themes identified by HRM professionals that reflect their understanding and value of IF in their organisational context, as well as the limited HR practices they were able to identify as valuable to identifying foresight in their employees. The four broad emergent themes from Phase One are:

- *Challenges of developing foresight in organisations*
- *IF Characteristics*
- *Outcomes of IF*
- *HR Practices*

Figure 4.11 Overall Phase One emergent themes
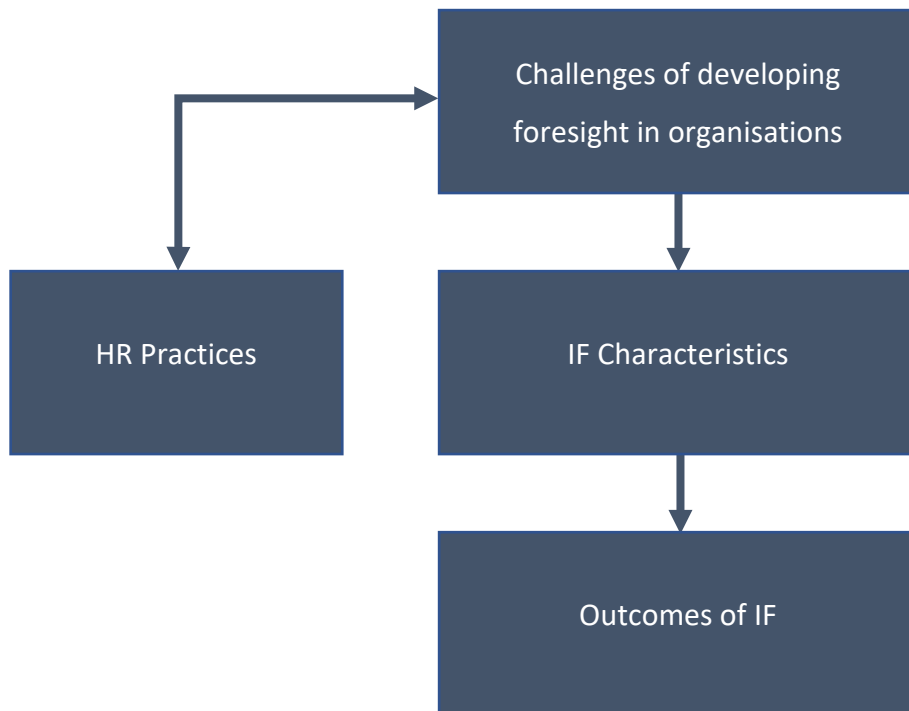
Several important factors emerged from the findings to contribute to the Phase One emergent themes in Figure 4.11. These factors are summarised in Table 4.1 below, and then briefly discussed in relation to their relevance to the Phase Two process and response to RSQ1.

Table 4.1 Phase One broad emergent themes and contributing factors

Challenges	IF Characteristics	Outcomes	HR Practices
- Individual influencing factors - Organisational influencing factors	- Past experience (self / others) - Reflection - IF Characteristics	- Influencing others - Change process - Development of others - Decision-making - Negative Implications	- Limited knowledge of existing practices and IF - Psychometric testing, behavioural and situational qu's

4.6.3. Challenges of developing foresight in organisations

With the potential to impact the overall success of fostering, developing, or nurturing IF in organisations, aspects of this theme will be critical to explore in Phase Two. In terms of

individual influencing factors one of the major threats to organisations is that knowledge or experience for IF takes time to develop. This has potential implications for HR practices in terms of types of positions considered in HR planning (e.g., casual, part-time, temporary, permanent, or tenured), but also the mechanisms put in place to ensure knowledge is retained and shared within the organisation (e.g., mentoring, training and development programs, overall knowledge-management strategies, and incentive programs). The outcomes of discussions with employees in Phase Two about their IF in terms of their past experience will be critical to understanding the potential impact of these issues.

In terms of understanding why some employees don't have IF ability, or perhaps are reluctant to use IF, or even rely on others when their own IF is limited and they need others' input, the exploration of how individuals experience foresight in their lived worlds of working in organisations (through Phase Two) is expected to shed light on these issues. Of particular interest and related to the Phase One insights are aspects of culture, trust, and supervisory or leadership style that may have influence in these areas, as well as understanding the significance of past experience (as mentioned) and its contribution to IF.

From the perspective of organisational influencing factors, as seen above, culture of the organisation appears to play a key role in the challenges of developing IF in organisations. As previously discussed, culture can influence supervisory or leadership style, and determine the level of trust and autonomy invested in employees, which in turn may be impacting employees' reluctance to use IF and contributions of right brain creative thinkers. A culture that potentially stifles the aspects needed to foster IF is likely to impact negatively on the critical thinking ability of employees, and consequent outcomes of decision-making and other factors (e.g., mentoring or sharing of knowledge) essential for employees to influence and participate positively in an organisation's change process. Overall, understanding the issues that potentially impact directly on IF from both the individual and organisational perspectives will provide valuable insight to the study.

4.6.4. Individual Foresight Characteristics

Factors directly attributed to IF ability appear to be numerous, as reflected in the IF Characteristics theme which incorporates ten sub-themes (shown in Figure 4.5 in Section

4.3.2). Isolating and understanding the role of past experience will be crucial in providing HRM professionals insight into how they manage their workforce to foster and develop IF in their organisations. In addition, the role of past experience of others should not be underestimated. Through practices such as storytelling and mentoring, employees' IF foresight ability may be positively influenced. In addition, the sharing of knowledge through these practices may combat the issue that IF dependency is a risk when KM practices do not support the transfer, capture and sharing of past experience and valuable knowledge and experience for IF that takes time to develop in employees.

The role of such IF characteristics as emotional intelligence, critical thinking, future thinking, intuition and more will be explored through the phenomenological process of the Phase Two interviews. Through reflecting on their own experiences with foresight in their work – it is hoped the data will inform if and how each of the IF characteristics contribute to IF ability, and if so – which characteristics seem central to the phenomenon. These insights will allow for a deeper understanding of how IF can then be supported in an organisational setting and will provide valuable insights regarding how HR strategies can support the development and nurturing of IF to benefit the organisation.

Finally, one of the large contributing factors to IF as determined from the Phase One data, was the surprisingly complex emergent theme of reflection. Given the potential dual role of reflection in being an IF characteristic as well as an important contributor to developing others, it will be valuable to gain insight into if, why, and how employees partake in reflection, and the perceived benefits of doing so – as part of the IF process. This will lead to better understanding about how employees can both develop their own IF but also share their foresight with others through mechanisms such as storytelling and collaboration to achieve better outcomes in their jobs and for their organisations.

4.6.5. Outcomes of Individual Foresight

In considering the outcomes of IF and the contributory categories of influencing others: development of others (mentoring and knowledge transfer); IF in the change process; and IF in the decision-making process, as well as the perceived negative implications of IF – there are some clear connections with the other emergent themes

identified above. For example, HRM professionals talked about ways in which they believed IF ability contributed to employees overall improved decision-making outcomes, as well as the benefit of employees contributing to change programs or the development of others through sharing their experiences. For organisations to know if resources should be directed toward programs that encourage mentoring and other IF-building mechanisms – these outcomes need to be established as being linked to the IF experience of employees in their work. Phase Two will explore the perceived benefits of employees' IF through discussing their experiences and outcomes of work, and their role in scenarios. In terms of the perceived negative outcomes identified, the researcher hopes to particularly explore the concern of risk associated with over-dependency on those with IF gained from long-term employment and past experience with their organisation. It is worth exploring development of others more specifically, given it featured in all of the interviews.

Development of others featured as an important outcome in the IF process of organisations. HRM professionals shared their own experiences as well as others' observations around the helpful nature of collaboration in filling gaps of IF, as well as the importance of the sharing of knowledge through storytelling and reflection (with others) in developing others' foresight. Uniquely, this emergent theme can be considered both an outcome of IF in organisations – due to the positive impact of storytelling and knowledge sharing on others in the organisation; but also, an input to the IF process given the propensity for employees to reflect and collaborate with others during the IF process. Another important aspect of this emergent theme is that it may be influenced by organisational factors such as culture and/or leadership/supervisory skills – in terms of fostering or hindering IF in employees. Phase Two insights regarding the experience of employees with the multiple categories existent within this emergent theme will clarify the value of strategies such as reflection and collaboration in organisations seeking to foster IF. Through either confirming or dismissing this phenomenon, the study will provide HR practitioners with valuable information to make decisions around strategies for workforce planning.

4.6.6. Human resource practices

Insights from HRM professionals regarding current practices and lack of understanding around IF in their organisations will contribute to Phase Two outcomes to enable the researcher to determine several ways in which HRM strategies can help identify, develop, and nurture IF to have long-term benefits for the organisation. Analysing the contributions of HRM professionals in terms of discussion around existing use of psychometric testing and selection interview techniques, and the challenges of defining and identifying foresight in employees, as well as other related issues such as culture, mentoring, developing others, emotional intelligence and more, facilitated valuable insights. The researcher aims to combine knowledge gained here in Phase One – with Phase Two insights – to arrive at recommended HRM practices aimed at fostering, developing, and harnessing IF in organisations. These will be presented in Chapter 8, Discussion – where research sub-question two will be answered. It is hoped that Phase Two will shed light on issues such as IF being difficult to define, measure and identify in employees – as confirmed here in terms of organisational-level influencing factors for challenges of developing IF in organisations.

4.7. Phase One conclusion

Phase One has provided valuable insights regarding the perceived value of IF in organisations from the perspective of HRM professionals, in addition to current understanding about IF practices used in HR processes. Understanding the challenges associated with identifying and defining IF, as well as the perceived characteristics, influencing factors, and potential outcomes of IF within organisational contexts, provides focus for the collection, interpretation, and implications of data in Phase Two. In addition, data from Phase One will be considered alongside Phase Two findings to establish the existing understanding of IF in organisations and determine how HRM practices could play a key role in identifying, fostering, and nurturing IF potential in their employees.

Phase Two results are presented next across Chapters Five, Six and Seven. The phenomenological nature of the methodology for Phase Two resulted in a rich understanding of the lived world of foresight for employees within the two organisational contexts.

5. Phase Two IPA Results – Part I

5.1. Overview of the chapter

Chapter five outlines the overall approach for the presentation of Phase Two Interpretive Phenomenological Analysis (IPA) results and presents the first chapter of findings. Phase Two IPA interviews comprised twenty-seven interviews in total, twelve interviews with employees from an organisation within the Finance & Insurance Industry, and fifteen interviews with employees from an organisation within the Utilities Industry – both organisations located in the Sunshine Coast region of Australia. The data produced rich accounts of the lived experiences of participants in relation to the phenomenon of IF in their lifeworlds. Results also reflected contextual factors that impact IF in organisations, as described by the Phase Two participants. The chapter will first explain the structure and presentation of the results chapters and then present a theoretical framework of IF. Next, findings for the first three superordinate themes of IF will be presented.

5.2. Approach to IPA analysis and results chapters

Results of the IPA analysis are presented across three chapters, demonstrating the breadth and depth of the analysis undertaken for Phase Two of the study. Many IPA studies inherently feature a series of interpretive and analysis steps beyond those inherent in thematic analysis. In aiming for 'coherence and integration while preserving nuances in the data' (Elliott et al., 1999) and for purposes of clarity, the approach adopted by the researcher to present the findings across three chapters is articulated here.

The IPA analysis followed the detailed process described by Smith et al. (2009) and outlined in Chapter 3 (see Section 3.8). In summary, reading and re-reading of transcripts was followed by initial noting which resulted in early emergent themes for each case. Emergent themes were then analysed through 'charting, or mapping' (Smith et al., 2009, p. 96) resulting in the production of unique conceptual maps for each participant (see example Section 3.8.4). Several coding strategies were utilised to analyse the emergent themes both within and across cases (See Table 3.8 in Chapter 3) to determine which themes (and cases)

shared 'higher order concepts' (Smith et al., 2009, p. 101) leading to final superordinate themes. A major outcome of the Phase Two analysis is the 'Master Table of Themes' developed as recommended by Smith et al. (2009), which shows connections for Phase Two participants as a whole (noting the importance in IPA of ensuring unique idiosyncratic instances occurring within cases is maintained and represented at a higher level), as well as how themes are nested within the superordinate themes (See Appendix 4).

The resultant ten superordinate themes are explored across three chapters of the study. Results Chapter Part I (Chapter 5) comprises three superordinate themes unique to IF ability in individuals and is thus labelled "The Person". Results Chapter Part II (Chapter 6) comprises three superordinate themes related to the process of IF ability and is thus labelled "The Process". Results Chapter Part III (Chapter 7) comprises four superordinate themes related to both the outcomes of the IF process ("The Outcomes") and the organisational influences associated with IF ability ("The Context").

Finally, and aligned with the 'interpretive' element of IPA as defined by Larkin, Watts, and Clifton (2006), the researcher applied an interpretive lens to summarise each superordinate theme in an interpretive conceptual map drawing on the experience and knowledge of the researcher, aligned with foresight literature, with a focus on the hermeneutic circle, to bring meaning to the personal experience of participants. This map features at the conclusion of each superordinate findings section. The structure of chapters depicting their associated superordinate themes is shown in Figure 5.1.

Figure 5.1 Phase Two results chapters format

Chapter 5 - The Person	Chapter 6 - The Process	Chapter 7 - The Outcomes & The Context
Superordinate Theme 1	**Superordinate Theme 4**	**Superordinate Theme 7**
- Interpretive conceptual map	- Interpretive conceptual map	- Interpretive conceptual map
Superordinate Theme 2	**Superordinate Theme 5**	**Superordinate Theme 8**
- Interpretive conceptual map	- Interpretive conceptual map	- Interpretive conceptual map
Superordinate Theme 3	**Superordinate Theme 6**	**Superordinate Theme 9**
- Interpretive conceptual map	- Interpretive conceptual map	- Interpretive conceptual map
		Superordinate Theme 10
		- Interpretive conceptual map

5.3. A theoretical framework for Individual Foresight

A theoretical framework for Individual Foresight has been developed from the results of the Phase Two IPA analysis (see Figure 5.2). The framework captures the richness of qualitative data revealed through participants' lived experience with IF in their lifeworlds, yet also stems from the interpretive nature in which the researcher's own experience and knowledge in the field of human resource management and through the foresight literature, has enabled engagement, analysis, and conceptualisation of the data to arrive at a new understanding of individual-level IF in organisations. Aligned with IPA methodology, this framework responds to the primary research question *How do employees experience individual foresight in their organisation?*

Figure 5.2 A theoretical framework of Individual Foresight
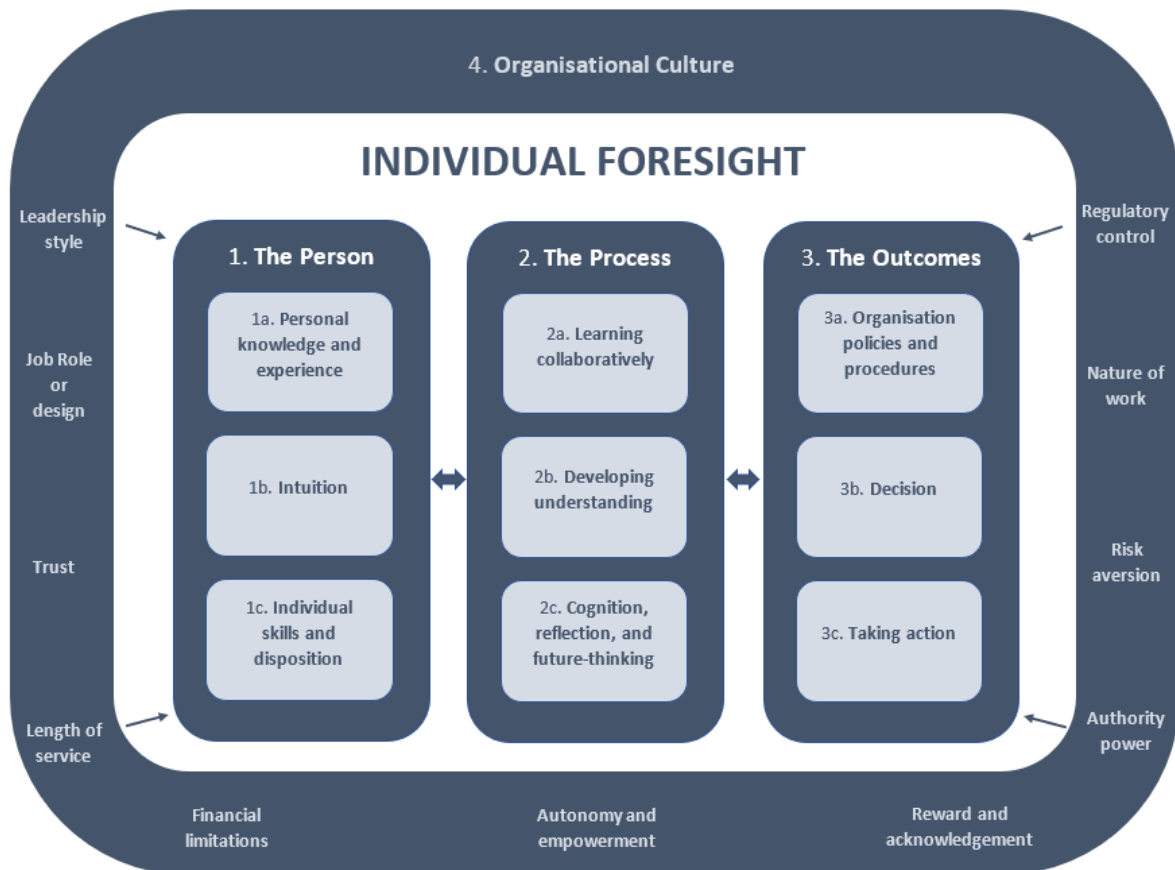
Insights from the IPA analysis will now inform the development of this theoretical framework for IF. The first area of the framework to be explored is "The Person".

5.4.   Individual-level contributors of IF: 1. The Person

Findings of the IPA analysis revealed three individual-level contributors (superordinate themes) of IF: *Personal knowledge and experience (1a)*, *intuition (1b),* and *individual skills and disposition (1c)*. Each of these superordinate themes comprised several emergent themes which will be explored throughout the analysis (see Figure 5.3).

Figure 5.3 Superordinate themes (Individual-level contributors) of IF and associated emergent themes
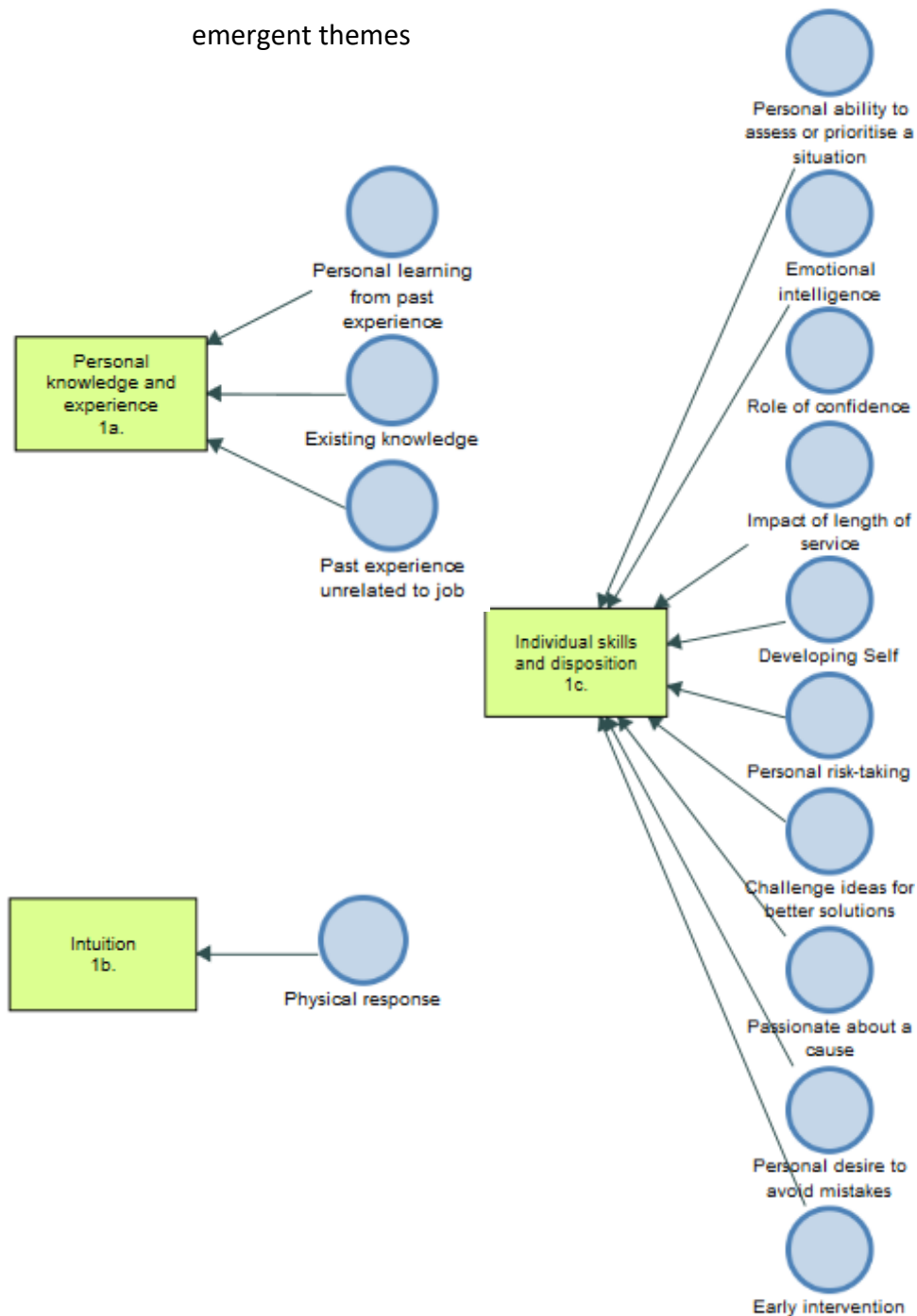
5.4.1. Personal knowledge and experience (1a)

The superordinate theme of p*ersonal knowledge and experience* comprised three emergent themes: *Personal learning from past experience*, *existing knowledge*, and *past experience unrelated to job* (see Figure 5.4)*. The description for this superordinate theme was:

Participants refer to their past work experience, but also their existing knowledge.

Figure 5.4 Superordinate theme personal knowledge and experience (1a) and emergent themes
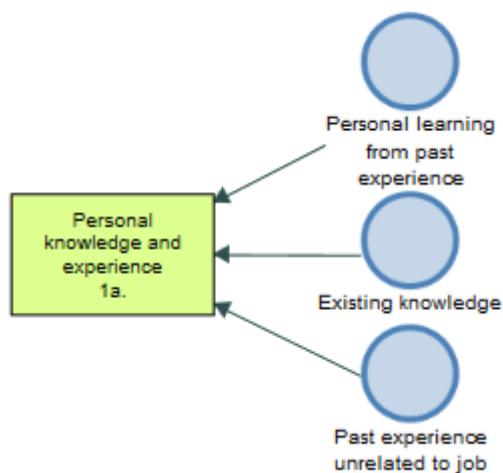
Personal knowledge and experience are significant in terms of their necessity in facilitating IF in individuals. As the literature explained earlier (Suddendorf & Corballis, 1997), unique to humans is the ability to partake in *Mental Time Travel*, either into the past via *remembering*, or into the future via *imagining*. To do this humans rely on their episodic memory (personal experiences), as Tulving (1984, 1985b, 2001) argues, in order to recall past experiences, as well as *autonoetic consciousness* (the self-knowing function of the brain i.e., self-awareness that an event *did* take place in the personal past) (Tulving, 1985b). Thus, humans cannot partake in IF without having developed personal experience. Data for Phase Two confirms that every participant regularly referred to their past work or life experiences during their experience of IF. During initial coding for this superordinate theme the researcher distinguished between personal learning from past experience – which was

personal experience in work, past experience unrelated to job – which was personal experience outside of work, and existing knowledge – which comes from either type of experience in an employees' life. A sub-theme for personal learning from past experience included *varied career influences foresight ability*. Each of these emergent themes will be explored further below.

5.4.1.1. Personal learning from past experience

By a significant number, references to personal learning from past experience (118) far surpassed the other two emergent themes (existing knowledge – 39, and past experience unrelated to job – 15). These figures indicate the prevalence of interview data that employees described in relation to the learning they draw on from their past experiences related to their current work practices and IF – as one would expect in a study about foresight in the workplace. In discussing personal learning from past experience all 27 participants were either direct about their learning, as described by *Rachel*: *"I'm drawing on experience and knowledge with the, you know, with the very few bits of information I'm given.";* or referred to lessons learned like *Matt*: *"Even if you go backwards, I find that that also teaches you that's a lesson."*. In discussing the relevance of his own past experience, Alan highlighted the potential contribution of his experience to future outcomes:

> *"[ ] it's trying to predict before making a change - the outcome of that change, so that you can try and proactively learn from your past mistakes, rather than making those same mistakes over and over again." Alan*

Alan's description here of how he draws on his past experience points to the importance of this feature of IF. As established, in order to imagine what the future outcomes of one's current work situation might be, there is a process of recollecting relevant past experience (or in this case lessons learned) to help avoid mistakes in current decision-making and actions. This process highlights the value of mental time travel to employee's everyday work.

There were several other associated outcomes (i.e., links to other superordinate, emergent or sub-themes of IF) observed regarding personal learning from past experience. First, in order to learn from past experience, employees partake in reflection, that is, they

take time to think about the future to anticipate outcomes of their current situation (as implied by *Alan* above). *Reflection* and *thinking about the future* will be explored as emergent themes in terms of "The Process" undertaken in IF (in Chapter 6). However, it is valuable to note, as per *Geoffrey's* recount of an incident where his reflective process not only called on personal past experience, but also demonstrated his ability to imagine the future of the scenario he was in – that this process of thinking about the future and drawing on past personal experience and knowledge to impact future outcomes is significant to employee's IF:

> *"I remember [ ] we decided this was the right way to [go - but wondered] are we just now about to make the same mistake again? [we] debated [why] it did not work last time [ ] I think that that level of experience and [ ] reflecting back and filtering those scenarios through previous experiences [enables you] to be able to project things forward." Geoffrey*

One interesting comment shared by two of the participants (Alan and Gill) in relation to past experience, was about the potential for repeated references to past experience being a possible negative thing for organisations. This issue emerged from Phase One when one of the HRM professionals highlighted the same issue in her organisation. Interestingly, Alan has a self-awareness about this issue: *"[ ] if you start referring to the past too much [ ] you risk becoming a bit preachy."* (Alan) while Gill was observing the potential limitations of referring to past experience when in a situation: *"So when you only take from past experience, I think it can hinder the other, the other options or opportunities that there are."* (Gill). Alan's comment may be related to his own sense of self because he was an employee who developed others' foresight effectively through sharing his own knowledge and experience through storytelling often (note – storytelling is revisited in Chapter 6 as part of the "The Process" of IF and learning collaboratively). Gill's comment, however, highlights a potential learning point for HRM professionals considering practices associated with sharing knowledge. For example, methods such as scenario-planning or visioning could be important when developing others' foresight – to ensure past experience of employees does not hinder potential alternative pathways to job outcomes.

Alistair's work involves important decisions about infrastructure that can help solve problems. When he responded to how valuable foresight was to his work he explained:

"[ ] it might be 15 days before we're really confident [of] the outcomes… you've got to almost have a crystal ball sometimes - unless you've got an immense amount of experience where you're absolutely confident that a particular change is going to do for a particular result [ ]"

This comment aligns with Phase One outcomes about the perceived value of long-term employees to a business in terms of their unique knowledge and experience valuable for IF. In terms of the value of *personal knowledge and past experience (1a)* to organisations, several participants recounted stories of incidents that had been reported, prevented, or acted on quickly due to their past experience or knowledge - to avoid an escalation and detrimental outcomes for the organisation. *Alan* provided a good example:

"I was talking to the control room operator. And I basically said I need an emergency network intervention [ ] I told him quickly, I said, you know, we've got a [major incident] and I knew that was absolutely a prosecutable incident [ ]" Alan

When prompted about how *Alan* chosen to respond – he exclaimed *"it's lived experience [ ] having been in the situation before. Knowing what action needs to be taken immediately."*. Valuable consequences like this should be noted regarding the positive and significant impact of IF during safety incidents in workplaces.

Although intuition emerged and established as its own superordinate themes (explored in Chapter 6), eleven of the 27 participants referred to, or described feelings of intuition and past experience in terms of how both have contributed to their decision making. This provides support to the argument that intuition results from past experience (Dane & Pratt, 2007). *Hugh* demonstrated the lack of distinction of participants at times when referring to intuition and past experience – which will be explored further in Discussion Chapter 8:

"[ ] it's a bit like trusting your gut - it's something - you don't - I'd certainly - I'm aware of it - and I do trust it now - I'm aware that I do need to use that - and draw on experience, but [it's] not something I necessarily think about all the time." Hugh

As expected, participants spoke about 'knowing' when they referred to their past experience. This holds great significance in the foresight literature given the role of humans'

memory systems in mental time travel (remembering and imagining) in the process of episodic foresight. Many participant accounts referred to knowing with just a few examples provided below:

"[ ] because we've done it - we know what to do [ ]" Jake

"I would say that's experience that's allowed me to understand that there's something wrong [ ] I know this is something, which can be difficult [ ]"
Michael

Finally, in relation to personal learning from past experience, the data indicated insightful references to valuing diversity in employees' past work history. The researcher felt it was important to acknowledge this sub-theme, labelled *varied career influences foresight ability,* given the accepted practice of emphasising past experience when recruiting individuals for work. *Bonnie* suggested that people who are *"good"* at IF *"[ ] have had a very varied background in their career, and a lot of different industries and stakeholder engagement."*. This findings supports the perceived value of diverse experience expressed by HRM professionals in Phase One and will be an important consideration for HRM practices targeted at identifying individuals with IF.

The *personal learning from past experience* emergent theme drew out some very important aspects of IF, namely the role of past experience in contributing to personal current knowledge and experience, and the value of past experience to intuition and knowing. The other two emergent themes in *personal knowledge and experience (1a),* although not as prevalent as *personal learning from past experience*, generated some important insights which are summarised below.

5.4.1.2. Existing knowledge

Existing knowledge refers to knowledge participants have about their jobs, and / or about their organisation, learned over time. 17 out of 27 participants discussed their existing knowledge, and although 60% of these references were also coded as *personal learning from past experience***,** 40% of the comments offered unique insights about the role of corporate knowledge in their own experience of IF. For example, when *Howard*, who

works in a position of central control in his organisation, was describing a major incident that required the combined knowledge of many organisational teams to solve, he declared:

> *"[ ] if this had of been a brand new [team], we would have really struggled to identify those options so quickly [ ] corporate knowledge was invaluable here [ ] as much as corporate entities love [ ] having people come in - and bring in fresh ideas - and that's important and there needs to be a blend of that. It's also important to retain that corporate knowledge. [ ] and so we rely on the collective wisdom of the group." Howard*

Howard's comment demonstrates not only the value of corporate knowledge in heightened scenarios requiring corporate knowledge to determine *'options'* for successful outcomes, but also conveys a sense of frustration when this is perhaps not considered by those making workforce planning decisions. In terms of IF, this emphasises the central role of effective KM practices that could foster IF in workplaces. *Jake* also reflected on the value of others' knowledge when he acknowledged shortfalls in his own *"[ ] there are those moments. So, I don't know anything. So, there's people out and about who know more than I do about certain things [ ] And so I'll put it up out there to other brains and say – help [ ]".* *Jake's* comment highlights the importance of collaboration in IF – which is discussed in Chapter 6. While knowledge in general, and corporate knowledge in these examples is valued and even sought after at times, on other occasions, participants felt knowledge can work against you when there is an unsupportive workplace culture: *"[ ] people are punished for passing on relevant information based on foresight"* (Janelle). *Janelle's* fear associated with sharing her IF knowledge appears reflects the culture in which she works, where IF may not be valued, or could be viewed negatively. This issue is addressed in Chapter 7 "The Context".

A final observation from existing knowledge that seems relevant to emergent theme *using formal work systems and processes* and superordinate theme *intuition (1b)* was a point raised by *Ronnie* who proposed that sometimes, although there are existing procedures to follow, his actions come down to being *"instinctive"* and *"knowing what to do [ ] – you have to prioritise what you have to do [ ] a lot of it does come instinctively."* This emphasises the value of existing knowledge, which supports Dane and Pratt's (2007) explanation that intuition relies on past experience. Arguably, this experience in turn leads

to knowledge that guides an employee's intuitive decisions and actions. The final emergent theme in *personal knowledge and experience (1a)* relates to past experience that is unrelated to an employee's job.

5.4.1.3. Past experience unrelated to job

Although a smaller number of references about experience fell under this emergent theme, 40% of the participants contributed views associated with past 'unrelated' experience they felt contributed to their IF. Overall, participants agreed life experiences, and sometimes adversity, beyond the workplace were beneficial to their own and / or others' IF ability. These views are captured in the comment below:

"[ ] but I think the people that I've found that do it [think strategically for IF] the best, or develop the ability to do it, are those that are empathetic [ ] I think those that are [ ] open minded to religion, race, gender, sexual orientation, like it sounds really, really crazy, but - it seems they're the ones that are able to empathize best with, with multiple people [ ] I find that people who have had to go through adversity [ ] and [ ] work your way up through the ranks [have or develop IF]" Geoffrey

Adversity has been shown to be associated with resilience and better problem-solving ability (Hulaikah, Degeng, & Murwani, 2020; Stoltz, 2000). While no specific studies appear to have focused on the role of adversity in foresight, given the nature of cognitions involved in the foresight process, it is possible adversity is an important factor for IF. *Hugh* supported the idea that diverse experience enhances IF with his suggestion that "travelling" provides employees with *"experiences"* that result in *"developing that foresight constantly – if you're getting exposed to lots of different scenarios [ ]"*. Given the opportunity organisations and HRM professionals have to explore strategies to develop IF in organisations, this is an interesting outcome and may have implications for pursuing personal development options for employees.

5.4.1.4. Summary and interpretive conceptual map of *personal knowledge and experience (1a)*

The analysis for *personal knowledge and experience (1a)* reveals three emergent themes of *personal learning from past experience, existing knowledge, and past experience unrelated to job.* However, the analysis and related discussion reveals the complex nature of these themes in terms of how individuals in organisations experience IF, and how this can be interpreted through the literature related to foresight. Figure 5.5 represents the interpretive analysis of the researcher related to the superordinate theme 'Personal knowledge and experience'.

Figure 5.5 Interpretive analysis of superordinate theme personal knowledge and experience (1a)
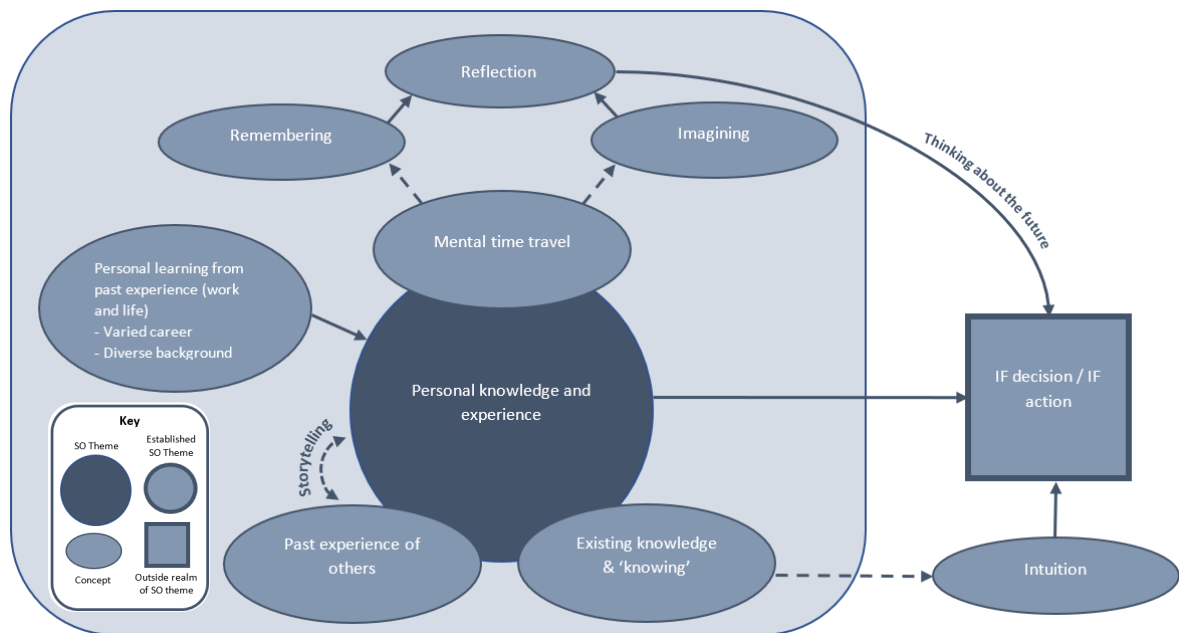
In summary, the analysis highlighted several key points. First, personal knowledge and experience is necessary for the process of mental time travel, and the ability for employees to travel both forward (when *imaging* outcomes of actions and decisions) and backward (when *remembering* related past experience) when utilising IF in a situation. Most employees partaking in this activity described a process of reflection or time taken to undertake this mental time travel to contribute to their IF. Second, personal past experience of participants (and the diversity of this experience), along with the shared experience of

others (through such means as storytelling) and existing corporate knowledge or 'knowing', was deemed valuable to the decision-making process, where some participants referred to drawing on intuition as part of this process. These findings are summarised below, prior to moving to the analysis of *intuition (1b)*.

5.4.2. Intuition (1b)

The superordinate theme of *intuition* comprised one emergent theme of *physical response* (see Figure 5.6)*.* The description for this superordinate theme was:

Participants discuss intuition, or a gut feeling or sense of something that informs them during the foresight or decision-making process. Often, they will refer to intuition as stemming from past experience - being in similar situations in the past and this conjuring up intuitive feelings.

Figure 5.6 Superordinate theme Intuition (1b) and emergent theme

The role of intuition in IF emerged as a significant contributor to how employees experience IF. This supported the findings from Phase One interviews that intuition is one of the 'Key IF Characteristics' in the IF process. Given the positioning of intuition as a key contributor to decision-making in organisations (Hodgkinson & Sadler-Smith, 2018) this important outcome from the Phase Two data was escalated to a superordinate theme separate from the "individual skills and disposition" emergent theme. This superordinate theme featured in 20 of the 27 participant interviews (nearly 75% of the sample). One sub-theme was distinguished in the intuition data which pinpointed the physical response of participants during situations they described where intuition was a part of their experience of IF.

5.4.2.1. Physical response

When describing intuition and how they experience intuition in their work, employees often described the physical responses that seemed to inform or influence how they were feeling and the actions or decisions they took resulting from their intuition. Sinclair (2010) explores the role of affect in intuitive processing, identifying the potential for affect to influence intuition at three different stages: as an antecedent (e.g., the potential role of mood to 'trigger or reinforce intuitive processing.'; during the intuiting process (e.g., as part of the decision-making process); and as confirmation (e.g., a sense of "weight falling off one's shoulders" (pp. 380-381). Many times, participants would refer to either a feeling in their 'gut' – or a change in their breathing during certain scenarios when describing their experience:

> *"[ ] like a pain in my gut like –[ ] I'm not a stressful person… but that site*
> *stresses me [ ] just a sinking feeling in my gut just because I know [ ] it's*
> *one of the repeat offenders." Edward*

> *"[ ] it was precisely when I probably was solidly recalling previous*
> *situations where I was feeling uncomfortable [ ] I'm using my intuition very*
> *much. And during this meeting, it was really a gut feeling. I was not feeling*
> *comfortable with the information I had." Michael*

Edward and *Michael* both attribute their sense of intuition, or the 'gut' feeling they describe to past experiences – which had obviously provided them with knowledge and memories that appeared to trigger their intuition (as evidenced by Edward's use of *"I know"* and Michael's reference to *"recalling previous situations"*). These observations are consistent with studies that have established that expert knowledge influences a person's intuition and subsequent decision-making (Dane, Rockmann, & Pratt, 2012). There are several other observations within the intuition superordinate theme - of interest to this study.

Participants spoke of how intuition features in their IF experience, and that they have learned to trust their intuition - as evidenced below by *Stephanie*:

> *"I go with my gut instinct and I'm never wrong [ ] the older I get the more I*
> *just follow my gut instinct and it gets - you know that's the right answer. [ ]*

When I was younger, I tended to go against that gut feeling. But now, it's just a bit of experience."

Stephanie's thoughts about her intuition align with the expert knowledge and past experience literature above, however, it was interesting to observe her growing confidence and trust in her intuition over time. However, *Howard* and *Jake* mentioned that one should exercise caution when making intuitive decisions where the perceived risks are higher:

"[ ] But when it's such high stakes, you can't rely on intuition to make the final decision, you have to have some facts or evidence base to make the final decision." Howard

"I'll go with a gut feel sometimes...but obviously if it's a big decision and there's money and infrastructure at stake I'll do what the bit of paper [says]." Jake

In terms of risk-taking, S*arah's* discussion supported the role of expert knowledge in intuition and decision-making when she claimed her intuition came from *"past experience or knowledge"*, but also mentioned she is quite *"risk averse"* and this impacts her *"mindset"* which impacts her intuition and decision-making as well. This self-analysis of being risk-averse poses an interesting question for the role of risk-taking in IF and the implications for intuition and decision-making. This issue is discussed below in individual skills and disposition in terms of employee's risk-taking propensity and the implications for whether employees feel confident and supported enough to take risks in decisions for their work.

It is clear from the data that intuition plays an important role in decision-making, and that for some people intuition manifests in a very physical way and influences their decision-making or approach to a task. The importance of intuition, particularly when linked with expert knowledge specific to an employee's work (Dane et al., 2012) and its role in decision-making was highlighted by *Bonnie*, who felt that organisations should acknowledge and value individuals who make intuitive decisions more:

"I think intuition is, a lot of people have it, it's just, it's an inability to get that recognised and accepted by the business to do something about in time before a consequence emerges."

Crucial in this reflection is the issue *Bonnie* highlights regarding position power in the organisation, and whether a person using their intuition, and supposedly their IF, will feel

supported and encouraged to do so. *Bonnie* also implies that at times this influences outcomes and "consequences emerge[s]". Sadler-Smith (2008) highlights the value of intuitive decision-making and intuitive 'types' in organisations and suggests that HRM professionals are well-positioned to implement strategies that support and embrace this important construct. This discussion will be pursued in chapter eight (Discussion) in the context of organisational culture and the influence of leadership style and risk-taking tolerance of the firm on individual IF outcomes.

Acknowledging the role of intuition in workplace decisions is highlighted by some of the participants' examples, either when intuition isn't acted on in their workplace, or in *Ronnie's* case, where intuitive decisions have been *more* important than following procedure to keep people safe:

> "[ ] we do have a procedure to follow. However, it comes down to probably [being] more instinctive. [ ] safety comes first with that. [ ] knowing what to do [ ] you have to prioritise what you have to do. But a lot of it does comes instinctively [ ] you've got to make that safe [ ]" Ronnie

In light of the propensity for intuition to guide behaviour and decisions, *Byron* suggested the need to consider negative feelings arising from intuition due to an undesirable past experience – and that these feelings could hinder actions and decisions of an employee. However, he also pointed out that intuition is an important aspect in the decision-making process because:

> "You can have a gut feeling but you've still got to give it some, some respect and some consideration to make sure you're heading in the right direction." Byron

Phase Two data confirms the value and role of intuition in the IF process, particularly when guiding behaviour and contributing to decision-making.

5.4.2.1.   Summary and interpretive conceptual map of intuition (1b)

Although the analysis for intuition only resulted in one emergent theme of intuition, 'physical response' it is clear that intuition is an important contributor to the IF experience in organisations. Several connections to other superordinate and emergent themes were

evident from the analysis. Figure 5.7 represents the nature of participants' experience with intuition when experiencing IF in their organisation, as interpreted by the researcher.

Figure 5.7 Interpretive analysis of superordinate theme Intuition (1b)
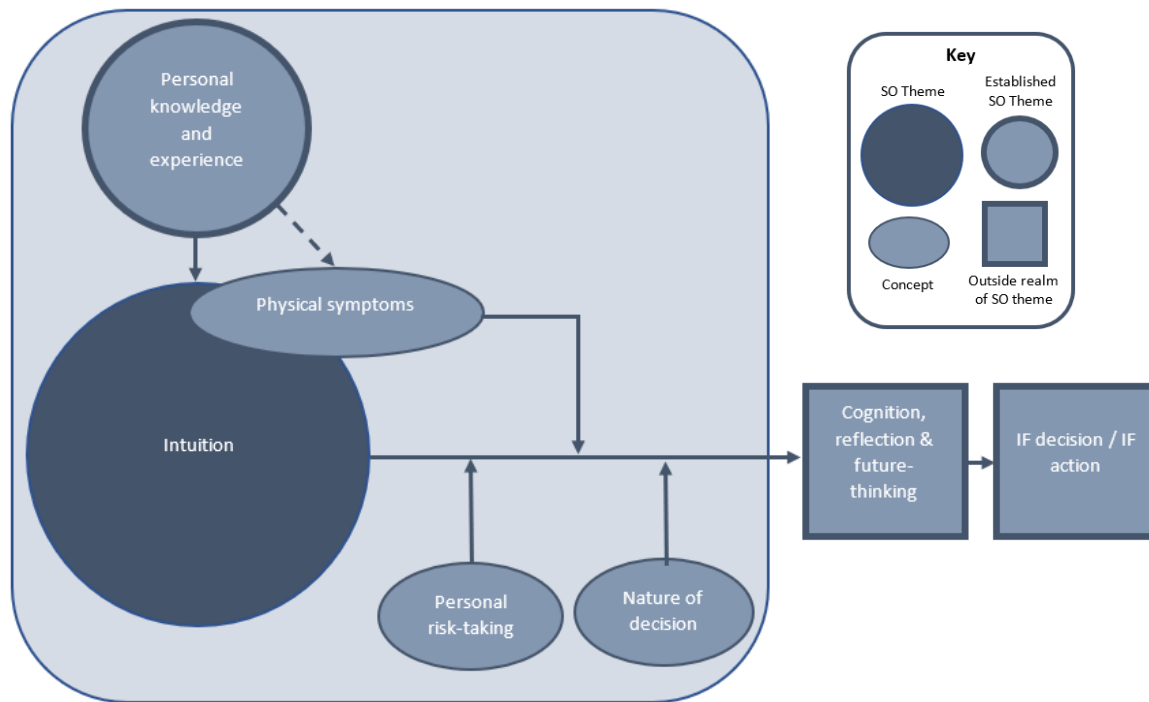
In summary, intuition appears to be a key contributor to the decision-making process in IF. The influence or role of affect in intuitive decision-making is evident for many participants, and influenced by their own past experiences, which tend to manifest in physical symptoms the employee considers as part of their decision-making outcome in enacting their IF. The way in which employees experience affect in their intuitive decision-making process appears to be influenced by their propensity for risk-taking, or the level of importance or formality they place on the decision itself. These findings will be considered in chapter 8 when discussing HRM implications and the influence of culture on the nature of decision-making (or intuitive decision-making) in organisations.

5.4.3. Individual skills and disposition (1c)

The superordinate theme of *individual skills and disposition* comprised ten emergent themes as shown in Figure 5.8*.* The description for this superordinate theme was:

Participants refer to existing skills, abilities or disposition of themselves or other employees when assessing and prioritising a situation they perceive as requiring IF

Figure 5.8 Superordinate theme *individual skills and disposition (1c)* and emergent themes
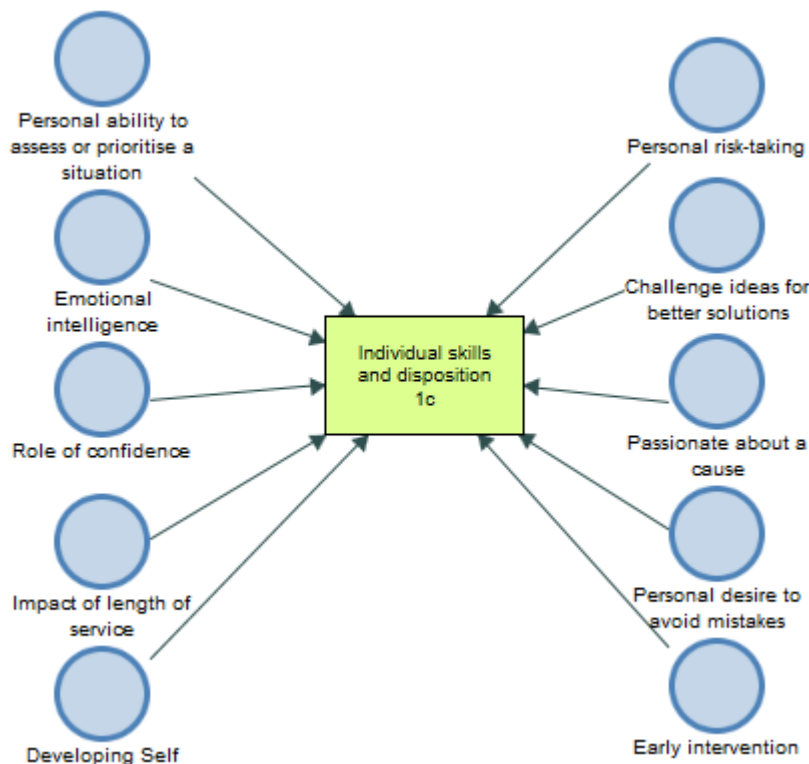
Distinctive from personal knowledge and experience (1a), individual skills and disposition aimed to capture all other uniquely individual aspects of an employee's skillset and abilities associated with the IF experience. This superordinate theme was important for all 27 participants in Phase Two and was the third largest set of codes in the Phase Two data (after learning collaboratively (2a) and organisational culture (4)). When compared with Phase One outcomes, this theme captured several sub-themes from 'IF Characteristics' identified by the HRM professionals such as assessing personal risk and emotional intelligence. Individual skills and disposition captured 10 emergent themes. Whilst this

analysis is not able to address all of these in detail, there were many interesting and significant observations.

5.4.3.1. Personal ability to assess or prioritise a situation

Many participants referred to their personal ability to assess or prioritise a situation when considering their experience with IF. There were numerous examples (67 references from 20 interviews) of employees conveying how they do this, such as *"[ ] you can throw out just many different options [ ] start thinking about the pros and cons of each of those options."* (Alan), and *"I provide all that information [ ] there's key recommendations of risks, [ ] of opportunities - but all the information is there [ ]"* (Rachel), and finally, Ronnie identified the value of taking time to assess and prioritise a situation:

> *"I looked at my mapping and everything [ ] it only takes 10 seconds or five to 10 seconds. It just brings me back a little bit. But yeah, it's hard to do because everything's going at once but actually doing that actually creates better decision making and, and helps you prioritise what's important."*
> *Ronnie*

It was clear from the prevalence of references that an ability to assess and prioritise situations is a vital component of IF. Associated with this ability was the nature in which participants varied on both their *strategy* for assessing and prioritising tasks, but also the *timing*, or time taken to undertake this process. This points to the temporal preference literature in chapter two and highlights the relevance of this construct for IF. For example, *Ronnie* spoke about how he takes *"ten seconds"* when he arrives at an incident, which he says *"[ ] creates better decision-making, and helps you prioritise what's important"*. *Vincent* utilises scenarios to *"plan[ning] possible solutions to the job [ ] before you get there."*. *Sarah* referred to *"[ ] reflecting, making sure that I've got the results [ ] and they're under those limits before I make a decision"*, and *Jake* described how he waits until he has responded to urgent priorities before he *'perhaps half an hour an hour into a scenario [ ] might have a chance to [ ] write down [ ] I did this'* in his diary. The variation in skills sets for undertaking the process of assessing and prioritising tasks is discussed can be related to concepts of time management, self-management, prioritisation of tasks and planning (Claessens, Van Eerde, Rutte, & Roe, 2007, 2010). These particular work skills seem specifically useful in the process

of foresight and should be considered by HRM professionals attempting to nurture IF in their organisations.

5.4.3.2.   <u>Emotional intelligence</u>

Another prevalent construct related to *individual skills and disposition (1c)* was emotional intelligence. Over 80% of Phase Two participants referred to elements of emotional intelligence (EI) utilised in their experience with IF. As discussed in relation to Phase One results, EI is an important aspect of leadership and decision-making and it was anticipated EI would feature in Phase Two results here. 22 out of 27 participants made references either directly to EI or EI-related phenomenon in their working activities (88 references in total. These references were captured in four sub-themes of EI, including self-management, self-awareness, emotions influencing foresight ability, and personal knowledge limitations or expertise. Similar to references for assessing and prioritising tasks, EI references were abundant in the sample. Only a few references are included here as a result of space limitations for the thesis.

Ronnie's description highlighted the role of reflection, self-management, and scenario use (or future-thinking) when drawing on his IF to respond to a situation:

> *"I go a little bit quieter [ ] I don't get panicked by it [ ] probably because*
> *I've been doing it for such a long time now [ ] I know my scenarios in my*
> *head so I get a focus on what I need to do. So then when I'm on site [ ] I like*
> *sort of generate more of a calmness to a hectic situation because I know*
> *everyone else is panicked by it [ ]." Ronnie*

From this observation it's clear that EI competence is very important for the process of IF. *Cognition, reflection, and future-thinking (2c)* is one of the "process" related superordinate themes presented in chapter six, however, it is worth noting EI's value here as an individual skills or disposition relevant to IF.

A novel observation in relation to IE was the role that emotions may play in IF effectiveness. *Alan* felt that his foresight ability "fall[s] away" when he is in a "heightened emotional state". This is somewhat explained by Elsbach and Barr (1999) when they highlight the potential costs of negative moods on decision-making. This is worth noting in

terms of employees' ability to manage stress, or their disposition in possessing a certain resilience in their work, and how this might be valuable to the effectiveness of their IF. When asked to describe her feelings about a time she drew on her foresight in an important meeting, *Janelle's* response demonstrated the importance of EI in managing emotions when using IF. She described feeling…

> *"[ ] a bunch of different emotions really [ ] I was trying to manage - was keeping cool, calm, and collected [ ] trying to manage those feelings [ ] thinking about articulating this clearly and instinctually to [ ] intelligent people who maybe don't have the information but have the capacity to understand the information."*

Managing her emotions was clearly related to *Janelle's* EI, however, the other interesting observation from this excerpt is the implied pressure *Janelle* felt in actioning or voicing her IF. This issue relates to employees *taking action (3c)* from their IF, and possible implications from *organisational culture (4)* which are discussed in latter results chapters. EI competence was shown to be useful for employee's IF as demonstrated. Beyond EI and personal ability to assess or prioritise a situation, the results for individual skills and disposition also included a number of intriguing contributors.

5.4.3.3.   Role of confidence

Confidence was noted by just under a third of participants as playing a part in their experience of IF and was discussed in a number of different contexts. In terms of *having* confidence, *Bonnie* described her own confidence to act on her IF when others lacked confidence, *"my response to that straightaway would be right, stop the job. [ ] Other people won't have that same confidence and will probably just maybe hang around and try and help with the situation [ ]"*. In terms of *building* self-confidence *John* explained his preference for seeking input from others during the process IF, *"It's nice to have things validated [ ] for ego, for confidence [ ]"*, and finally, in *building others'* confidence *Edward* spoke about his team members feeling uncomfortable *"making a decision on their own back"* and described how he builds their confidence through building trust and encouraging them to make their own decisions as a result of their IF. The way in which employees refer to confidence in their experience of IF points to self-efficacy playing an important role in an employees' propensity

to act on their IF. We will revisit this issue in chapter seven when discussing the outcomes of foresight and the superordinate theme *taking action (3c)*.

5.4.3.4.   Impact of length of service

Interestingly, and implicated with the importance of tenure in IF (for organisational knowledge and experience), impact of length of service was identified as an emergent theme in terms of the implications for IF it poses for some employees. Although fewer (than EI for example), the number of comments associated with length of service were surprising and potentially far-reaching in terms of the success of fostering foresight in organisations. *Gill* discussed that despite the level of seniority of employees and the expectation that they use IF, if they have entered the business as a newer employee, they *"haven't drank the Kool Aid [ ] they don't really have the same pattern recognition that we have [ ] you're able to have a different level of experience and a different perception on things [when you've been with the organisation longer]."*. In addition, *Ronnie* and others referred to the *"institutionalisation"* of employees, describing:

> *"[ ] over a period of time - they don't have to use foresight - because their job is to go from A to B [ ] do this, do that [ ] they haven't used foresight because they haven't had any need to use it.". Ronnie*

In terms of the past experience discussion earlier, the researcher anticipated that long-term employees would most often be associated with *having* IF. However, similar to the phenomenon of institutionalisation that *Ronnie* describes, *Vincent* shared his thoughts:

> *"[ ] there are guys that have worked here for 30 years [ ] they probably don't have that much foresight, because [ ] if they don't have a high level of ownership or responsibility, or they feel that they don't - with their pay level - then their foresight will not develop [ ] there are guys there we could probably say they're institutionalized [ ] I think foresight would be something that wouldn't be as strong with them." Vincent*

A few conclusions could be drawn from these reflections. First, references were mostly made about longer-term employees becoming routinised compared to newer employees. Second, attitude or lack of engagement might mean longer-term employees have lost a sense of ownership and responsibility for the work they do. These are

interesting considerations for HRM practitioners who may be managing an aging workforce and seeking to foster IF in their organisation.

5.4.3.5.   Passionate about a cause

The issue of motivation could be associated with employees having a higher tendency to use IF when they are passionate about a cause. This was another of the emergent themes in *individual skills and disposition (1c)* where participants described moments where they felt driven to use IF due to their passion about an issue. In *Amanda's* case an article piqued her interest about women in leadership, which she said prompted her IF to circulate the article to other members of her team to promote awareness of an issue she felt passionate about. In *Alistair's* case he was compelled to report major concerns about maintenance to a very senior executive, which he pinpointed passionately as *"looking after the people"*. There were other examples where employees acted on their IF, risking their own jobs, out of interest for a cause or other people they cared about. Passion or belief in a cause seems to be important in terms of developing motivation for people to act on their IF and is therefore revisited in *taking action (3c)*.

5.4.3.6.   Developing self

A particularly significant emergent theme of individual skills and disposition was developing self. Defined as *"participants describe situations in their life that have helped them develop what they understand to be their IF ability."*, one third of participants provided examples of this tendency. *Anna* reflected about developing foresight as a young girl riding horses, explaining there are consequences that *"can be very physical, and harm you if you're not careful"* and if you do not prepare yourself well. *Brad* talked about the need to *"fail"* to understand *"what works, what doesn't"* and pointed to *"experience"* as the difference between how he works now and how he worked ten years ago. *David* spoke about having to *"learn from every interaction and how to get better - and to actually care to be better"* which was interesting in terms of the previous discussion about being engaged or passionate about something to care about using IF. *David* also mentioned, *"seeking feedback is a key part of it [developing IF] as well."*, which was supported by *Matt* who claimed, *"sometimes I sit and ponder for a little while - but I've learnt to - you know, ask for*

help. You know, that's something I'm working on, because I tend to not do that.". These latter observations about seeking feedback and input from others in order to develop, align with the outcomes of the superordinate theme *Learning Collaboratively (2a)* to be explored next. It is worth noting though, that the experiences described by participants regarding their self-development of IF were often associated with adversity, and therefore support the earlier finding that adversity or a variety of different experience beyond the workplace may benefit IF ability.

It is interesting to observe that when speaking about developing self, most participants unintentionally drew on activities of reflection in order to draw on past relevant experiences for IF development. *Vincent* summed up this phenomenon well when he stated:

> *"[ ] self-improvement. I think it's a really good way to make yourself better*
> *- and if you don't self-reflect on jobs [ ] I don't think you'll get the most out*
> *of the learnings out of those jobs. [ ] it's not until you're self-reflecting [ ] I*
> *think some people - just through their own natural desire to succeed - will*
> *probably have more foresight than others and it probably comes down to*
> *what do they want out of life?" Vincent*

Vincent's comment once again highlights the importance of reflection in the IF process and confirms research regarding humans' ability to draw on the past (remembering) in order to mentally travel to the future (imagining).

5.4.3.7. Remaining individual skills and disposition emergent themes

In an attempt to respond to space limitations for the thesis, the remaining emergent themes here have been summarised as follows:

Personal risk-taking, also raised by HRM professionals as a factor, could influence an employee's propensity to raise issues or act on their IF. Participants spoke of being trusted and encouraged to take risks when they feel 'safe'. *Janelle* spoke of a sense of being *"punished for passing on relevant information based on foresight, based on lived experience, based on prior knowledge, [ ]"*. This issue could be addressed through establishing a support workplace culture for IF.

Employees spoke of using IF when *challenging ideas for better solutions*. Strategies mentioned by participants were insightful and may be useful in fostering foresight in organisations. *Alan* discussed his preference to play devil's advocate in meetings as he felt *"there's a lot of potential foresight in that – where if we haven't challenged the thing well enough, it's bound to fail"*. *David* explained that in a group setting he would bring together five supervisors and ask them if they could arrive at a better solution, encouraging them to work together. Utilising collaborative techniques to challenge solutions to arrive at better outcome was common in this theme, which highlights the importance of *learning collaboratively (2a)* in the IF process – the next superordinate theme to be explored.

A *personal desire to avoid mistakes* explained when employees avoided making further mistakes for themselves personally - or for their organisation. *Anna* explained as part of her own IF why she double-checks things in her work, *"there's a personal and professional integrity issue, you know, I like to think I'm a person of integrity, and I like to do my work well. But also, it's the company's reputation as well."*. *Byron* expressed his feelings of accountability for machine maintenance in using his IF in reporting faulty machines, *"In my mind, seeing as I was responsible - I would feel as though I've probably failed - I've let the company down."*. These explanations provide insights regarding the motivation behind why some employees act on their IF and could help shape strategies for employee motivation for foresight development.

The final emergent theme for *individual skills and disposition (1c)* related to the tendency for employees to act early (based on their IF) to avoid negative outcomes. E*arly intervention* was exemplified by *Jake* who, on arriving at a serious environmental incident, explained that he *"knew straight away [ ] if I don't let people know what's going on here [ ] this is gonna be a snowball effect."*. This phenomenon is interesting in that an employee's disposition to want to avoid unnecessary escalation of a situation implies they are thinking about the future. *Cognition, reflection, and future thinking* are important contributors to the process of IF. In the case of early intervention discussed here, future-thinking – and an employee's ability to future-think - has been demonstrated as being of great value in terms of positive organisational outcomes.

5.4.3.1. Summary and interpretive conceptual map of Individual skills and disposition (1c)

The analysis for individual skills and disposition revealed numerous abilities and skills useful to employees engaging with IF. Figure 5.9 represents the associated relevant factors of individual skills and disposition for IF, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 5.9 Interpretive analysis of superordinate theme Individual skills and disposition (1c)
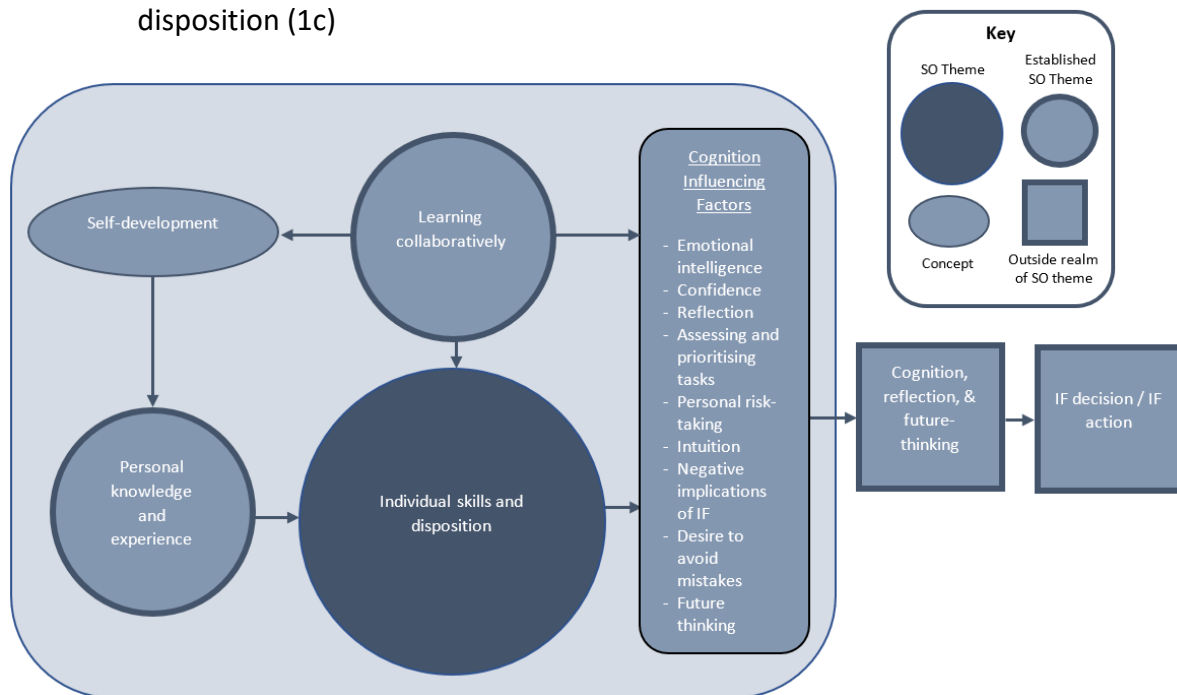
In summary, an employee's individual skills and disposition are influenced by their personal knowledge and experience, mistakes they've made in the past, and the self-development they have pursued or embraced in their personal or work life in terms of IF development. These factors contribute to an employee's ability to assess and prioritise tasks, draw on their EI or self-efficacy in situations, act on their passion, maintain their enthusiasm and commitment to IF in their work, and their propensity to think about the future when deciding to act on IF. These important skills and abilities influence the cognitions involved in IF that ultimately determine how employee's make decisions and act when in situations requiring IF. The implications of these findings for IF and other research will be further discussion in chapter eight – Discussion.

6. Phase Two IPA Results Part II

6.1. Overview and Individual-level contributors of IF: 2. The Process

Chapter six presents results related to "The Process" of individuals experiencing IF in organisations. Findings of the IPA analysis revealed three individual-level contributors (superordinate themes) related to the process of IF: *Learning collaboratively (2a), Developing understanding (2b),* and *cognition, reflection, and future thinking (2c)*. Each of these superordinate themes comprised several emergent themes which will be explored throughout the analysis (see Figure 6.1) incorporating the idiosyncratic differences among participant responses.

Figure 6.1 Individual-level contributors of IF process and associated emergent themes
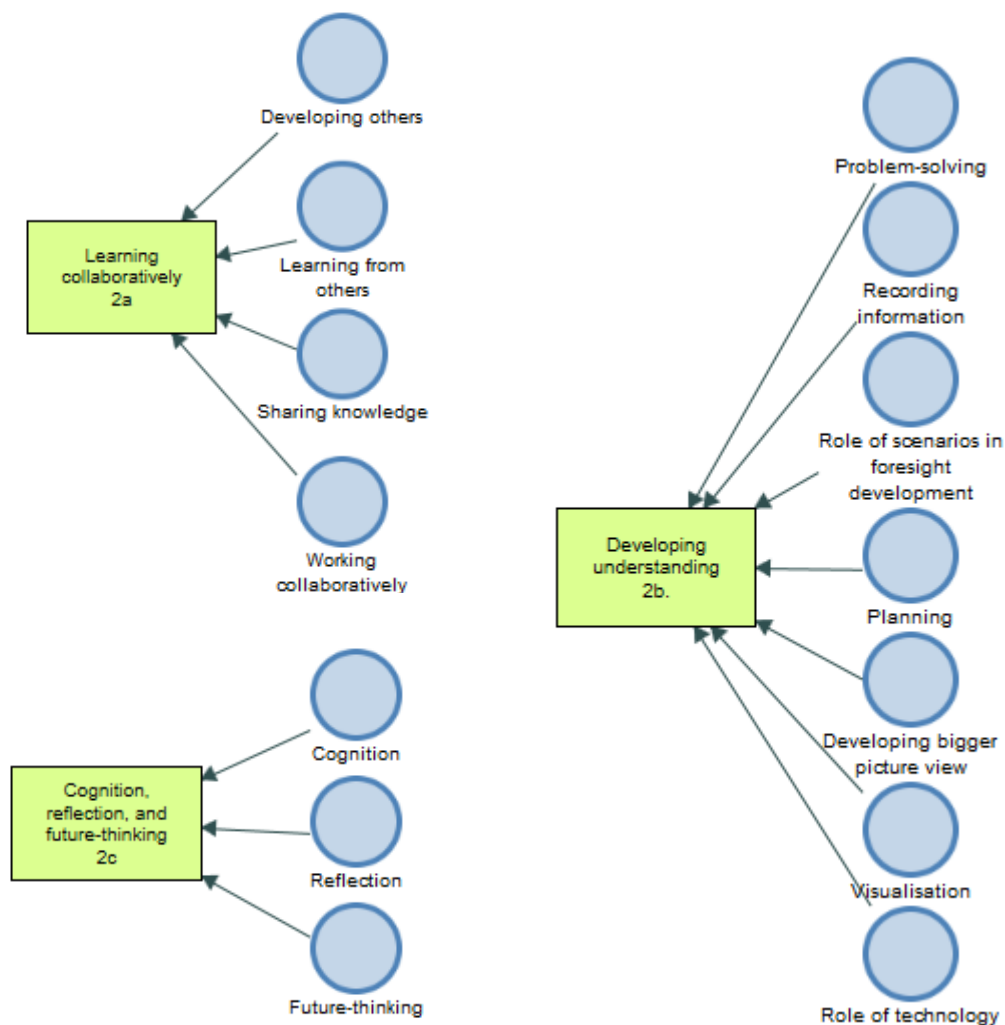
6.1.1. Learning collaboratively (2a)

The superordinate theme of *learning collaboratively (2a)* comprised four emergent themes: Developing others, learning from others, sharing knowledge, and working collaboratively (see Figure 6.2)*. The description for this superordinate theme was:

Participants refer to learning through sharing knowledge and stories and working collaboratively – often referring to the development of others through this process.

Figure 6.2   Superordinate theme learning collaboratively (2a) and emergent themes
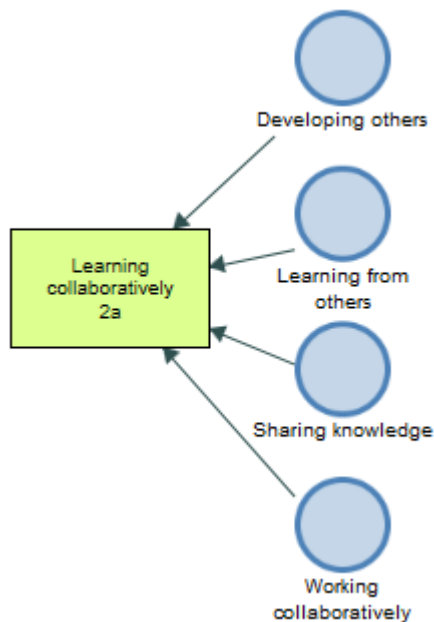
The superordinate theme of *learning collaboratively (2a)* emerged as an early and dominant theme in the Phase Two data. As chapter two revealed, limited literature and research studies around IF in organisations exist, with the focus of foresight literature in psychology on experiments that were mostly individual and controlled; and the focus of foresight in organisational settings strategically or organisational-level focused. Therefore, the phenomenon of collaborative learning in the IF process in organisations was surprising and exciting for the researcher, especially in terms of the potential implications for fostering and developing foresight in organisations. All 27 participants contributed to the learning collaboratively data.

6.1.1.1. Developing others

The largest emergent theme in *learning collaboratively (2a)* was developing others. This sub-theme captured moments in the interviews where participants described a process that they initiated to develop foresight or learning in others. As described previously, Phase Two's research design is centred around the phenomenological experience of employees with IF. It is important to note here that the researcher is aware that in describing ways in which participants have developed foresight in others, this could be considered a step away from the participant's lived experience of IF, however, as the interview excerpts demonstrate, the participants' lifeworlds include working alongside and supporting or developing their colleagues. In terms of IF, the data reporting remains true to the lived experience of individuals and how *they* exist and partake in the development of others either through initiatives born out of *their* own IF, or activities where *they* impart *their* IF on others through *their* daily work activities. Often, the activities recounted by participants described a process of team-based reflection in the work environment which could contribute to the development of team foresight or capturing team foresight. These instances comprised the sub-theme *group reflection*. In other instances, participants described opportunities where they developed foresight in teams through processes such as modelling behaviour or sharing experiences. These references comprised the sub-theme *team foresight development*.

Activities associated with developing others often stemmed from participants reaching out to colleagues, their network, or their teams in their own process of developing understanding. Foresight learning tends to be a two-way process – where the employee could be seeking input into their own IF, but then is able to contribute foresight to others' IF in that process. This is exemplified in *Alistair's* excerpt below:

> *"[ ] it's a way of setting yourself up for success [ ] to have a network of people that you know [ ] if you're sort of seeking a bit of support or advice to resolve a particular issue [ ] it's also good when it works back the other way and they feel comfortable to be able to contact me"*

> *"*

A number of other important aspects related to developing others in the IF process emerged. For example, at times, participants reflected on *how* foresight could be developed in other employees. *Anna* suggested organisations could *"[ ] teach people how to just ask yourself a question. And then how to allow ideas to come up or those natural responses that your brain will give you sometimes."*. *Byron* implied foresight comes with knowing and utilising *"[ ] the contacts you have, you can use their experience to make what your decision is much, much easier."*. These examples provide insight into the nature of activities valued by participants in how they undertake foresight practices and point to the valued role of networks in this process. The development of foresight in others sometimes happened more explicitly through the proactive actions taken by supervisors like *Alan:*

> *"[you] go out on site with those guys [ ] and what I personally do is go [ ]*
> *we've got this job here today - what do you think is the best action? [ ]*
> *what can you tell me on how we can do this job? [ ] if you don't ask those*
> *questions [ ] they don't think about that information."*

This and other examples demonstrate there is a lack of congruence about how to develop IF ability in others. However, it was surprising – even to some of the participants who were reflecting about IF for the first time – to hear about some of the strategies already in place that seem to contribute to building IF in teams. Group reflection activities like the one described below were often recalled by those in managerial positions:

> *"[ ] it's very important [ ] to go okay everybody come back [ ] and give us*
> *an update individually around the team. [ ] I've watched people not do that*
> *- and I've actually taken the incident manager aside and said [ ] I think you*
> *should do this every now and then because you're starting to lose control*
> *of the incident." Hugh*

In this example, *Hugh* was not only encouraging IF development in others by suggesting the team come together for reflection, but also demonstrated his own IF by suggesting to his past incident manager to do the same. This demonstrates that sometimes the development of one's own IF results in the development of others' IF too. This example also highlights the impact of knowledge sharing in IF. Other examples of team foresight development activities highlighted the propensity for participants to consider foresight development as a leader-led activity:

> *"[ ] as a leader, you create space for people to think [ ] you reward people*
> *that do this well [ ] you try and develop the new people in a way that gives*

them a solid foundation of knowledge and experience [ ] that's definitely
the responsibility of the leader to do that." Howard

Where IF is a leader-led development activity, this example highlights the importance of leadership style and development in IF-nurturing activities. This is discussed further in chapter seven in relation to organisational culture. Multiple strategies emerged when analysing how IF is developed in others including: creating reflection space; rewarding or acknowledging IF behaviour, sharing knowledge, role-modelling reflection, or storytelling (to share knowledge). These examples open up many possibilities for HRM professionals to plan effective strategies for the development of IF in their organisations. As mentioned, and demonstrated above, the process of learning appears to be two-way – as explored next.

6.1.1.2. <u>Learning from others</u>

The second emergent theme for developing others is learning from others. Although the analysis above demonstrated some instances of learning from others, the following excerpt poignantly represents this theme:

> *"[ ] a lot of the time, that's why I get subject matter experts from all across*
> *the business to come in and look at that same situation or to talk about the*
> *topic because my value in this role isn't just my experience. It's also my*
> *ability to interact with many different people across the business and make*
> *them feel valued or make them feel as though their input is genuinely*
> *valued." Geoffrey*

This excerpt not only represents the style of leadership that appears supportive of IF development (i.e., focused on knowledge sharing), but importantly it demonstrates the value learning from other network contacts to fill existing employee knowledge gaps. The excerpt also demonstrates a healthy organisational culture that supports learning through others, and results in employees who are comfortable in sharing their knowledge, or in seeking out others' knowledge where required. Sharing knowledge is the next sub-theme presented and represents nearly half of the total references that contributed to the superordinate theme of *learning collaboratively (2a)*.

6.1.1.3. Sharing knowledge

Sharing knowledge is vital, according to the participants, to developing your own and others' foresight. This is exemplified through the statistic that approximately 50% of excerpts in *sharing knowledge* also shared content with *learning from others*. This is logical given that when we share knowledge, there is a reasonable assumption that some learning will occur. The role and nature of communication featured in the sharing knowledge emergent theme. *Alan* captured this in his reflection about organisational change and how, in his view, as the complexity of the message increases, the tendency to share knowledge about that process decreases. *Alan* described this decline in communication by expressing that the *"foresight kind of falls away"*. The role of communication is highlighted by many participants as being a crucial component of the IF process. *Matt* reflected on this in a recent change process in his organisation: *"I just think drawing on foresight was, you know, we need to have really good communication [ ] we needed to look ahead and plan well and communicate well with everyone involved.".* The high importance placed on communication likely supports the need to overcome limitations of tacit knowledge. That is, knowledge that remains inside people's heads cannot be utilised by others for learning or foresight purposes. Therefore, it is crucial that organisations ensure strategies are supportive for the sharing of knowledge if they hope to develop IF in their employees.

One way that one of the supervisory participants successfully transfers his knowledge through communication is storytelling. Storytelling featured in the Phase One outcomes for *IF Characteristics* and is one way in which tacit knowledge can become explicit knowledge used to develop IF in others. *Leo* described several ways in which storytelling has been effective in developing his team:

> *"[ ] so I tell them little stories [ ] and one of my leaders said, you know, you kept me quiet for over half an hour - because I was so interested in the stories and the experiences of what you had [ ]"*

Leo also described how, instead of using storytelling to share his own knowledge – he used his IF to propose to seek out the story behind an employee's poor performance, resulting in a favourable outcome for all stakeholders. In that example, sharing knowledge through a form of storytelling resulted in the correction of an employee's work practices, a

learning outcome for the employee, and potentially hours saved of HR time resolving a dispute. These outcomes can be attributed to *Alan's* IF given he suggested it was worth approaching the employee before further action was taken by the leadership team.

The importance of supporting a collaborative learning environment in workplaces has been highlighted through the reflections above, which demonstrate the value that sharing knowledge and working collaboratively has in developing others and learning from others. Collaborative learning environments require people the facilitation of people working together. The final theme in this superordinate theme of learning collaboratively is working collaboratively.

6.1.1.4. Working collaboratively

Given the inherent nature of collaborative working that has taken place to facilitate the other emergent themes this part of the analysis concludes with a pertinent reflection by one of the participants, *Alistair*, about working collaboratively. In this excerpt *Alistair* captures the essence of KM in organisations. He discusses a sense of safety in sharing knowledge, refers to the value of networks, and acknowledges his own value to others' given his long-term tenure and existing knowledge and experience with his organisation:

> *"[ ] it's a way of setting yourself up for success I suppose. To have a network of people [ ] if you're [ ] seeking a bit of support or advice to [ ] but - it's also good when it works back the other way, and they feel comfortable to be able to contact me. [ ] people generally hang around [the industry] for a while - so you end up building pretty good networks. [ ] you see a lot of different scenarios over the span of a career. And we share our knowledge pretty openly. We're a bit of an open book, because there [ ] hasn't really been [ ] a lot of benefit from having intellectual property [ ] it's better to share your knowledge across as many people as you possibly can."*

6.1.1.5. Summary and interpretive conceptual map of learning collaboratively (2a)

The analysis for learning collaboratively revealed the value of KM in organisations in the IF process. Figure 6.3 represents the associated relevant factors of learning collaboratively for IF, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 6.3 Interpretive analysis of superordinate theme learning collaboratively (2a)
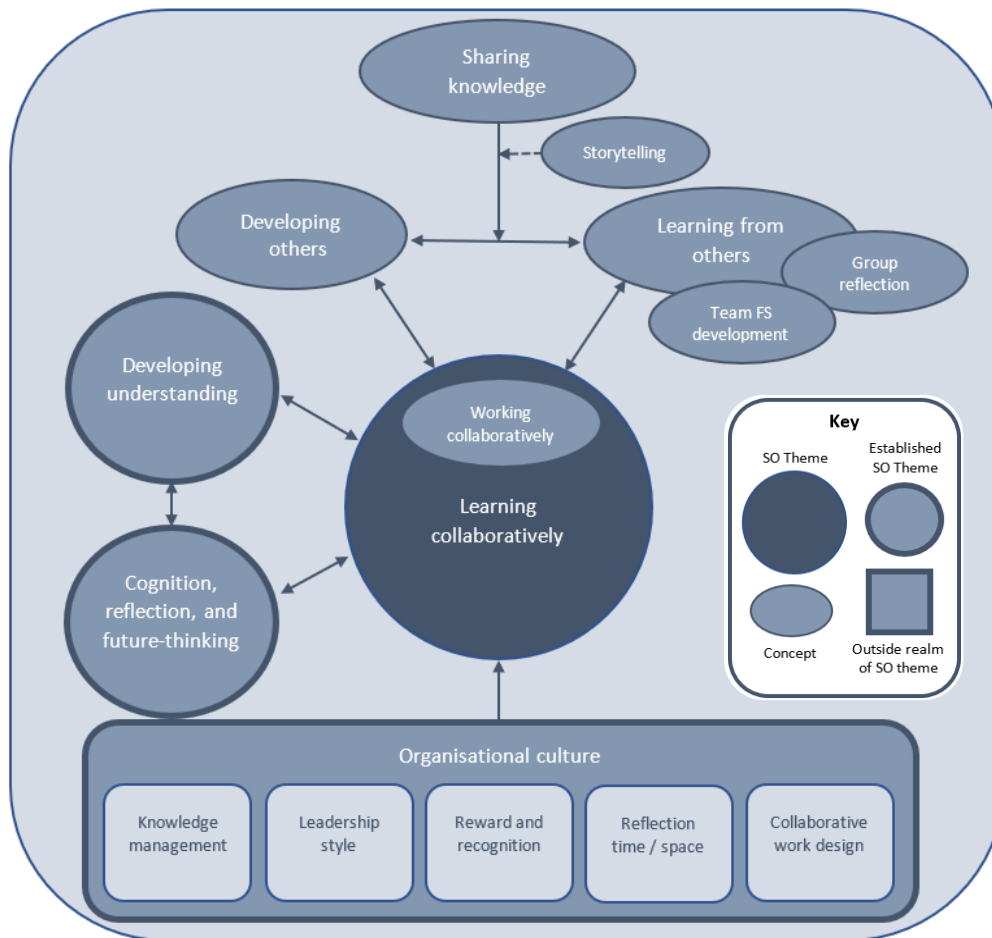
In summary, learning collaboratively is inherent in the experience of IF in organisations. There is a two-way benefit in the development of IF both for individuals fostering IF in group situations, but also in how those individuals gain IF through processes of cognition, reflection, and future-thinking during group reflective practices. An employee's IF contributes to understanding in their social network, however they too benefit from the collective knowledge of their network. Through strategies such as storytelling, group reflection, providing reflection space, rewarding, or acknowledging IF behaviour, sharing knowledge, or role-modelling reflective practices, knowledge sharing can flourish in organisations. These practices are supported by a culture and leadership that nurtures and rewards knowledge sharing, designs work and workspaces to facilitate collaborative learning and reflection and supports this process through good KM practices.

6.1.2. Developing understanding (2b)

The superordinate theme of *developing understanding (2b)* comprised seven emergent themes as seen in Figure 6.4. The description for this superordinate theme was:

Participants describe actions or processes they have undertaken to help develop their own understanding of a situation or problem.

Figure 6.4   Superordinate theme developing understanding (2b) and emergent themes
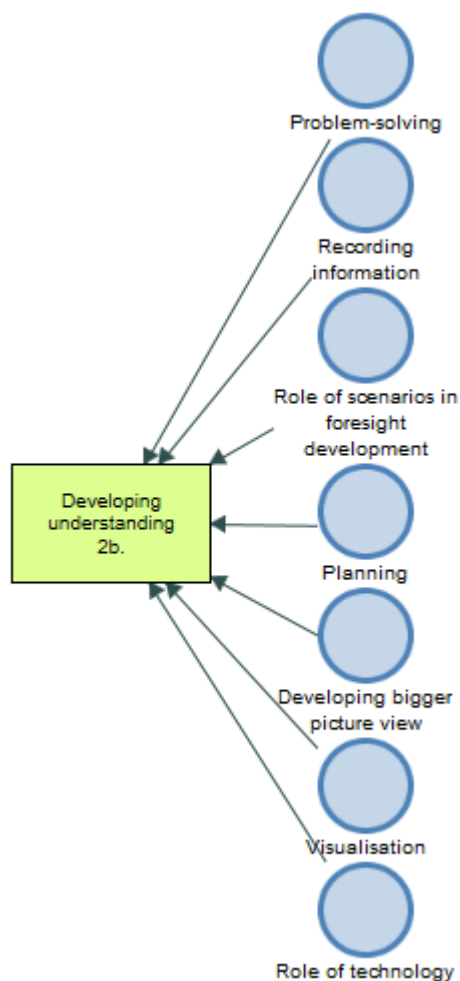
In Phase One the emergent theme of *IF Characteristics* comprised sub-themes of *critical thinking or problem-solving* and *planning,* which emerged from the HRM professional interviews. Here in Phase Two, participants provided additional insights into how they develop their understanding during the IF process, including problem solving and planning, recording information, use of scenarios in foresight development, the process of developing

a bigger picture view, the use of visualisation and the role of technology. The first emergent theme to be presented will be problem-solving. The developing understanding emergent theme included responses from every participant of Phase Two indicating its pertinence to the experience of IF.

6.1.2.1. Problem-solving

Problem solving as a sub-theme was well-represented across the sample with 70% of respondents choosing to reflect on some aspect of problem-solving as part of their IF experience. One of the key observations was the tendency for employees to seek out collaboration in the problem-solving process. Only six out of the nineteen employees who discussed problem-solving did *not* make reference to seeking collaboration. Collaboration for problem solving was reflected *Edward's* comment about their 'take five' group reflections:

> *"So that 'take five' is [ ] everyone who has had experience [can] bounce ideas off each other and learn [ ] that didn't work last time, but we tried this [ ] it just put some of those pieces of the puzzle together with the experience with foresight to see [ ] This is how they did it and that worked."*

Most employees spoke favourably about group collaborations however, it was interesting to note the emphasis by others on the robustness of the group problem-solving process. *Alan* expressed that he, *"[ ] need[s] to have a clear agenda, going into the meeting with clear outcomes that you want to achieve. [ ]."* This is an important insight to consider when determining strategies that support IF and collaborative learning in organisations.

Culture seemed to play a significant role in where employees 'focus' in terms of their individual problem-solving. *Jake* discussed how he works through scenarios in his head and that *"safety is the first thing that we're taught to do and you're thinking of no one else getting in harm's way or things getting worse."*. As well as observing *Jake's* future-thinking (i.e., generation of scenarios) to assist his problem-solving, his focus in solving problems reflects his workplace's strong culture for 'safety first'. This infers that strong, positive culture can influence the priorities of employees and how they approach problems and work when using IF. In contrast, *Rachel* pointed out the challenges of a highly bureaucratic

organisational culture that lacks trust in its employees. She felt that when working in research in organisations there needs to be *"a level of trust in giving people space to move forward with ideas and apply them"*. In terms of problem-solving, the issue of 'space' raised by *Rachel* was also mentioned by other participants in the problem-solving process when referring to the time needed, or available (i.e., not enough) for reflection as part of the problem-solving process. *Rachel* explained, *"[ ] time, like for everybody these days is a luxury [ ] everything has to be done [ ] in the most efficient amount of time available [ ]"*. The urgency of time, particularly in participants from the utilities industry, seemed to prompt immediate or faster problem-solving: *" [ ] we were under time pressure [ ] so it was touch and go [ ] by the skin of our teeth - we got the issue resolved satisfactorily [ ] probably [by] jumping immediately into [ ] problem solving mode."* (Alistair).

Despite time pressures evident in people's jobs, it seemed the process of reflection is highly valued by participants in order to solve problems, as exemplified by *Sarah's* comments: *"I go into a little bit of a mental check on these types of things [ ] then I very quickly go in towards the solutions [ ] definitely the first thing is that 'phwaw' and then it's simple pause…"*. It will be important when seeking to nurture IF in organisations that HRM professionals consider work design account for reflection time given the benefits gained in problem-solving through a reflective process.

6.1.2.2. Recording information

Record-keeping shared several excerpts with problem-solving, depending on each employee's approach and tendency to either explicitly record information during problem-solving, or hold information in their head (i.e., tacit information). Tacit knowledge and the importance of tacit knowledge to foresight and organisation success, was discussed in chapter two and will inform an important discussion about KM in chapter eight. Tacit knowledge was highlighted when discussing the emergent theme 'cognition' in *individual skills and disposition (1c)* earlier. The personal nature of knowledge, often stemming from one's personal experience, emphasises the importance of recording and then sharing that knowledge with others – as proposed by Nonaka (1994) in his spiral of knowledge model. Recording information, therefore, is often about capturing knowledge and transferring it

into a form where it becomes explicit, and strategies associated with learning collaboratively becoming vital. The problematic of tacit knowledge taking place in an employee's head during the process of IF was captured in Sarah's comment, *"So in my head, everything has got like a step and a process [and] then there's like a process map [ ] here's what the problem was [ ] here's the consequence and then here's your solution. So that's kind of how it structures itself in my head."*. To address this problem, *Hugh* ensures the foresight of his team is captured in formal records for future reference:

> *"[ ] we'll use our foresight to identify things [ ] and we'll start to put that*
> *process and document that into a formal checklist or something like that.*
> *And then we'll update that by using myself and my collective teams'*
> *foresight to improve on that [ ] we'll probably use it again in the future."*
> *Hugh*

Whiteboarding was a common method of recording or capturing information among participants, particular in the utilities industry, to then share information and brainstorm solutions. There were many instances where record-keeping, including the formalisation of records into policy or procedures, capturing knowledge from individuals: *"I developed a sim-chart to show the steps that are entailed"* (Bonnie), *"[I draw up] a fish bone diagram [ ] what are all the influences? What's the intent? What's the focus?";* and from teams – as demonstrated through *Hugh* above. The vast array of methods in which employees and teams already record information valuable to the IF process reflects human nature arguably reflects the positive intent of employees in sharing this knowledge for the benefit of the organisation. This bodes well for HRM professionals aiming to manage knowledge as part of the IF process.

6.1.2.3.   Role of scenarios in foresight development

In terms of the individual experience, the use of scenarios – which require future-thinking – appeared in multiple contexts for over 50% of participants. For example, when testing how options hold up against policy Sarah explained, *"I think of instances [ ] that have happened, or that I perceive would happen [ ] run that through the policy [which gives] directive enough to say, here's what your steps should be."*. Sarah works in an area where outcomes of their work are consistently measured and cross-checked by local authority

bodies. Ensuring her decisions and actions comply with policy is essential, which explains the value of scenario planning to her work. This is a key observation in terms of understanding the different roles that IF plays in different jobs and departments in organisations. Valuable tools such as scenario planning could be considered an essential part of some jobs to ensure compliance.

In contrast to using scenarios to check for compliance, *Ronnie* appears to mentally prepare himself for jobs by running through alternative scenarios prior to arriving on site, so he feels prepared and emotionally resilient regardless of how the incident unfolds, *"I know my scenarios in my head, so I get a focus on what I need to do [ ] then when I'm on site, and this is when the guys are on site too [ ] I like sort of generate more of a calmness to a hectic situation.".* This description demonstrates *Ronnie's* emotional intelligence in managing his emotions, but also highlights the value of personal knowledge and experience, and 'knowing' that *Ronnie* refers to. In terms of managing potentially stressful situations, it appears that employees like *Ronnie* can utilise their IF to ensure preparedness, resilience, and sound decision-making to maximise good work outcomes. As evidenced, scenarios provide ways in which employees make sense of, prepare for, or ensure compliance in their work. As such, scenarios seem an important element of IF in the process of developing understanding in one's work.

6.1.2.4. Planning

The emergent theme of planning captured when "participants refer to actions or thoughts that relate to a plan to approach a certain situation or problem - or the role of planning in foresight.". References to planning appeared to reflect the formal way in which employees consider the term planning i.e., as an organisational-level process or strategy. For example, planning references were usually made when employees were considering outcomes of their work at the organisational level, such as *Brad* referring to *'strategic planning'* or *Geoffrey* discussing the creation of *"a plan that's not just the best plan for now. It's the best plan for now and into the future.".* This was the case for seven out of the eleven participants and was reflected in the multiple coding of excerpts in this sub-theme to the superordinate theme of 'thinking about the future'. With the emphasis in Phase Two on

individual-level employees and how they personally experience IF in their everyday jobs, the emergent theme of 'planning' did not feature greatly in the IF process. The researcher, however, was intrigued in the close association of planning to the theme of future-thinking (discussed below) and was not surprised when at an individual-level, future-thinking was more closely linked to consideration of IF outcomes for people or the organisation. This is discussed further in 6.1.3.

6.1.2.5. <u>Developing a bigger-picture view</u>

Developing a bigger-picture view was an interesting sub-theme to emerge in terms of how employees 'do' foresight. This sub-theme reflected employees' propensity to think beyond the day-to-day of their jobs when making sense of their work or a scenario they are in. In a sense, the essence of excerpts in this emergent theme stressed the importance of reflection in work – in order to *see* the bigger picture and importance of one's work. For example, Alan described the need to understand the bigger picture to *"achieve"* an outcome of foresight:

> *"[ ] that simple approach of understanding the why [ ] often you get so lost in the day-to-day that you lose sight of where you've been and what you did last week [ ] that foresight becomes a lot easier to achieve."* Alan

Anna spoke about the need to *"understand the current situation [ ] to build a picture of what I think might need to be improved for the future".* It is almost as though a reflective step back is needed to take a foresightful step forward, which again highlights the importance of reflection in the IF process. *David's* description about how and why employees establish the need for foresight was fascinating. As an advisor within his organisation, he described his ability to *"understand the bigger picture and the people"* as opposed to some *'lower levels'* of employees that *"generally think about [their] world only – until they work [their] way up the food chain".* With this comment, *David* seemed to attribute foresight development to seniority and experience in the organisation – which is not a shared view by all participants – as discussed earlier when referring to the institutionalisation of longer-term employees and their tendence to lack engagement or interest in utilising IF in their jobs. Overall, a common thread worth noting when employees seek to develop a bigger-picture view was the need for reflection.

6.1.2.6.   Visualisation

Six participants referred to the practice of visualisation when discussing their experience of IF. Similar to the way in which participants used scenarios in multiple contexts, visualisation for this study was noted when "participants described how they think about the future either in their head or through recording visuals to help develop understanding and a bigger picture view of the situation." *Alistair* explained how he was "visualising what it all looked like" after receiving a phone call from his organisation's control room. He then proceeded to describe how he took himself through the whole process in his head - as he drove to the site. This process appeared to help him work through the predicted requirements for the job.

Amanda said she "scenarios play out in my head" where she then develops several "paths" that she will present to a trusted colleague for consideration and reflection. While *Matt* prefers to whiteboard his "thoughts" to get them "out of [his] head", *Geoffrey* was very precise about how he uses visualisation in the process of forming scenarios by:

> *"[ ] projecting my thought process forward, I'll - I guess in a very short period of time in my head sort of seconds not minutes, I just developed over time the ability to almost like picture a scenario." Geoffrey*

Visualisations seems an essential strategy for some employees to move from thoughts to more solid ideas and solutions as part of the IF process. Again, like developing a bigger picture view, the process of visualisation tends to require a moment of reflection where the employee takes time to process inputs about a situation and then picture the situation in their head (or on a whiteboard) in order to develop scenarios and resultant alternative solutions.

6.1.2.7.   Role of technology

The final emergent theme within *developing understanding (2b)* is the role of technology. Although represented by only one participant technology plays an increasing role in many employees' jobs where the work environment has developed to be more sociotechnical in nature (Makarius, Mukherjee, Fox, & Fox, 2020). For this reason,

acknowledging the importance of technology to even one participant's IF experience, was deemed an important component of developing understanding in IF. The employee, *Hugh* is located in a central position in his organisation where a *Supervisory Control and Data Acquisition (SCADA)* control system is used and comprises data outputs, indicator lights and other ways in which the employee can control, monitor, interact and record issues unfolding in his work area. There were some key outcomes related to IF of *Hugh's* recollection about the way he experiences IF when engaging with the SCADA.

Hugh referred to his reliance on the SCADA to indicate where and when problems arise in the system of his organisation. Sometimes this means *Hugh* experiences an increasing intensity in his work when a situation escalates, and multiple controls indicate multiple and growing problems across multiple work areas. In listening to *Hugh* and how he relies on and interacts with the SCADA, it appears he needs a high level of understanding about the functions of the SCADA in order to use his own IF to interact with the SCADA and request the right reports to indicate where and how a problem is unfolding. As discussed earlier – in relation to record keeping *Hugh* demands that lessons learned from situations where IF has played a role in his teams' outcomes – are captured and formalised to be used in future similar scenarios. This reliance on record keeping seems to be exacerbated by the *"reactive space"* that *Hugh* and his team operate in, which requires fast response times that align with organisational policy. This is a very important consideration for HRM professionals designing work and IF activities about sociotechnical or high-pressure work areas.

Finally, and in relation to how *Hugh* experiences IF in his job, he emphasises the role of reflection, lessons learned and capturing individual or group experience in formal documentation, to overcome the limitations of human cognition and 'remembering':

> *"[ ] foresight memory will tell you that you've been through that - but you're like, how do we deal with that? You might remember a general scenario of it, but you might not have all of the exact steps - and it's much easier if you can go and grab that list and go hey - okay let's follow that through methodically because [ ] you recorded that just after the last time when it was all fresh in your mind - and collated it then."*

In terms of implications for this study, the increasing role of artificial intelligence and use of technology in workplaces poses some very interesting questions about the unique

human ability of episodic foresight (Suddendorf & Corballis, 2007), and whether human limitations such as cognitive overload can be reliably addressed through the use of technology. Further, how will organisations effectively source and utilise IF knowledge when there is an interplay between humans and technology in the IF process? *Hugh's* case also polarised the role of reflection and record keeping in overcoming limitations associated with tacit knowledge and humans' 'remembering' in workplaces. This would be an important consideration when designing work to foster IF practice.

6.1.2.1. Summary and interpretive conceptual map of developing understanding (2b)

The analysis for developing understanding revealed the complex nature and multiple strategies utilised by employees to capture often-tacit knowledge related to IF, to develop understanding in the IF process. Figure 6.5 represents the associated relevant factors of developing understanding in IF, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 6.5 Interpretive analysis of superordinate theme developing understanding (2b)
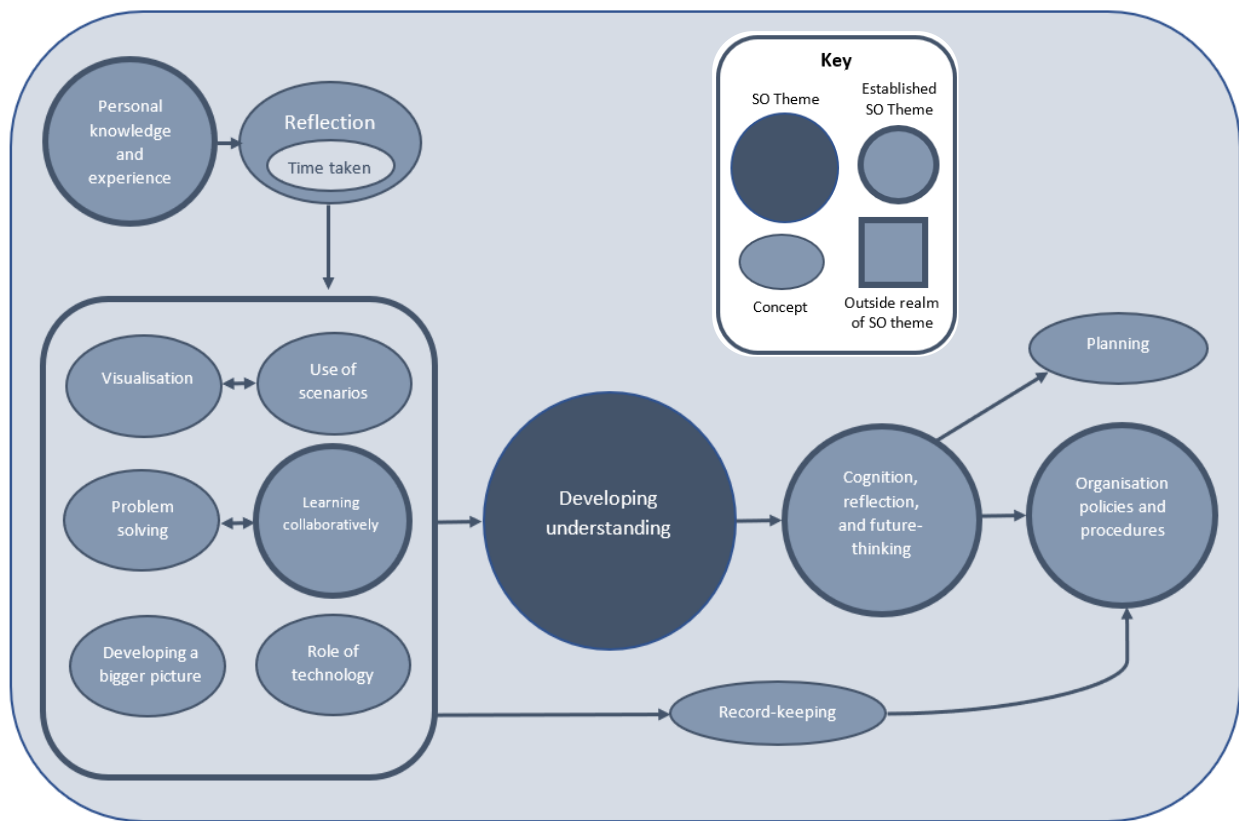
In summary, developing understanding emerged as a rich and complex theme in the IPA study. Through a process of reflection (in many cases) participants discussed how they conveyed or captured their own, or groups', tacit knowledge utilising various methods to contribute to understanding in the IF process. In addition, reflection appears to be enhanced by an employee's past personal experience and knowledge, contributing to their own IF ability, but generating tacit knowledge unique to that employee. Through various strategies of visualisation / scenario planning, problem solving, developing a bigger-picture view, and utilising technology, employees are able to develop their own and others' understanding – through sharing their knowledge and expertise, and in some cases – creating explicit knowledge resources (records) to contribute to organisational policy and procedures. Developing understanding contributes to the cognitive, reflective, and future-thinking processes involved in IF – and at times (for only some employees) encourages employees to consider a future plan resulting from their IF. Findings also pointed to the potential for KM strategies to play a substantial role in facilitating and sharing IF outcomes at the individual-level in organisations.

6.1.3. Cognition, reflection, and future-thinking (2c)

The superordinate theme of *cognition, reflection, and future-thinking (2c)* comprised three emergent themes as seen in Figure 6.6. The description for this superordinate theme was:

Participants describe the cognitive (thinking), reflective (taking time to reflect) and / or future-thinking (a propensity to consider immediate versus future outcomes) processes undertaken when assessing or engaging in a situation requiring IF.

Figure 6.6　　Superordinate theme *cognition, reflection, and future-thinking (2c)* and emergent themes
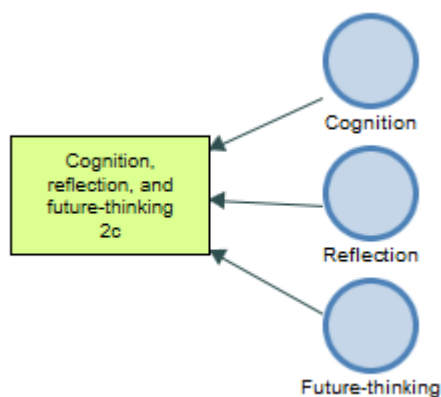
The frequency of responses associated with cognition, reflection, and future-thinking resulted in this significant superordinate theme in Phase Two, with 321 references capturing all 27 participant experiences. In relation to Phase One outcomes, cognition in Phase Two was the new name derived for *critical thinking or problem-solving skills*. Along with reflection and future-thinking, cognition was subsumed as part of this superordinate theme to capture the process-oriented nature of these three elements of IF.

In terms of the current study, the way people think, and process information can help understand important aspects of the IF process. This study is not experimental in its design, as many of the psychology research studies are, thus the nature of information about cognition, reflection or future-thinking was exploratory and dependent on how the participant expressed their experience with their thinking process when engaging with IF in their organisation. The analysis begins with examining cognition in IF.

6.1.3.1. Cognition

Employees' cognition processes emerged as unique and numerous. As a result, multiple sub-themes for cognition (beyond one sub-theme of 'tacit knowledge') were not formally categorised. The complex and alternative approaches to cognition in IF creates complications for defining how employee's cognate during the IF process. However, the rich tapestry of explanations facilitates a number of important insights related to this construct.

Reflection, once again, played an important role in IF, this time as part of the process of cognition for employees. *Alistair's* experience demonstrates this: *"[ ] so I'll just step away from the situation and go to somewhere where I can be by myself and just run through those thought processes."*. It is clear that reflection is a significant contributor to the IF experience in organisations. *Alistair's* explanation about how he chooses to step out of the scene of an incident to reflect, once again reinforces the need for HRM professionals to consider work design and allowances for reflective practice when encouraging foresight behaviour.

Brad's process of cognition in IF reflects his competence in emotional intelligence. It also supports other emergent themes of his individual case where emotional intelligence featured throughout his interview and in how he approaches IF (i.e., a focus on outcomes for all stakeholders). In terms of his own IF process, *Brad* describes how he has to, *"[ ] understand the details [ ] and sort of put everything in its place so that I can [ ] understand what the other person's saying [ ]"*. Brad focus on others during IF cognition also meant he prioritised a bigger-picture view when approaching situations and demonstrated future-thinking resulting in a consideration of the impact of his IF outcomes on others and the organisation. In terms of *Brad* making sense of the situations he is in, and wanting to focus on putting 'everything in its place', this aligns with research into the microfoundations of sensing capabilities, and construal-level theory described by Harvey (2022), where *Brad's* focus on his human experience, and relatively psychologically 'distant' focus (i.e., considering outcomes in the future) implies he is a higher-level construal compared to his counterparts who may be more focused on short-term deviations of their current work practices. Construal-level theory may offer insights into how and why some employees tend to partake in future-thinking as part of their cognition process in IF. The microfoundations

research offers some great insights regarding employee-level capabilities and will be explored further in the Discussion chapter. For HRM professionals wanting to foster and encourage future-thinking approaches from their employees, with obvious benefits in both work and organisational outcomes, Brad's EI also assisted his reflective and considerate approach to IF, pointing to multiple development opportunities to help enhance employee IF ability.

Other cognitive practices that emerged included chunking information into manageable pieces, where Byron explained *"What goes on in my head is...when I see a problem I break it into small manageable groups, [and] put it into little boxes [ ]"*; assessing and prioritising information, *"I'm constantly assessing the tasks that the situation is - and then making sure that I'm dealing with the highest priorities [ ]"* (Hugh); and using visioning and imagining to work through a problem, *"I'm projecting my thought process forward, I'll - I guess in a very short period of time in my head sort of seconds not minutes, I just developed over time the ability to almost like picture a scenario."* (Geoffrey). Each of these strategies enable employees to work through complex scenarios in which they call on their IF ability to arrive at positive outcomes.

Aligned with the earlier emergent theme of *intuition (1b)*, *Howard* referred to the role of intuition in his process of cognition during IF.

> *"[ ] there is this intuitive thinking that occurs early, where you rapidly sort of jot down everything that you think could work [ ] but when it's such high stakes, you can't rely on intuition to make the final decision, you have to have some facts or evidence base [ ] you have to understand the risk [ ] in the knowledge gap."*

Howard's description of cognition implies a certain level of 'knowing' in his intuitive processing, in terms of what he initially *"jot[s] down"*, but then he reverts to gathering data and evidence to support higher-risk decisions after he reflects on the limitations of his own knowledge and the nature of the risk involved. His recollection about how he cognates aligns with a description of intuition proposed by Sinclair, Sadler-Smith, and Hodgkinson (2009) that argues two 'broad categories' of intuition. *Howard's* propensity to make intuitive decisions based on experience and tacit knowledge (he is a long-term senior

manager in his organisation) which he said occurs for him *"rapidly"* in the early stages of his cognition process aligns with 'experience based' intuition, while his 'sensory intuition' – which involves affect – possibly triggered the risk identification and more 'rational thought' about the cognition process he was undertaking (Sinclair et al., 2009, pp. 400-401). While this study is focused on IF experience, it is clear that intuitive decision-making plays an important role in the way employees experience the processes of IF and consequent decision-making or actions and should be considered in implications of developing and fostering foresight behaviour in organisations. *Howard's* risk-averseness is also a reminder that an employee's unique skills and disposition play a role in their IF ability too.

Critical thinking was identified in Phase One as one of the perceived *IF Characteristics* of employees. This finding was confirmed in Phase Two where participants referred to the inquisitive, inquiring, or questioning nature of cognition in IF. *Rachel's* thoughts about her own IF compared to others reflected this IF approach, *"[ ] you got to have the discipline and curiosity to undertake critical thinking. So, you've got to have a curiosity to go, well, I wonder why that is?".* This proactive and critical thinking approach to IF was also evident in *Ronnie's* approach to IF and how he cognates. Note the time taken for this reflective process of record taking, and how *Ronnie* utilises this activity to assess and prioritise tasks too:

> *"[ ] a lot of the time, I'll get my diary and I'll draw this - looks like a tree. [ ]*
> *I'll write, machine operator - and I'll have a line of him, then I'll go this this*
> *[ ] It only takes me like five seconds [ ] I'll write a little [ ] it's almost like a*
> *tree graph [ ] I know that they're my key players, and I need to get it right [*
> *] if I have time, I used to also write down the things that are most*
> *important to me doing first."*

The exciting insights of this study regarding how individuals cognate and process information as part of their IF experience sheds light on the informal processes of analysis in IF, that are utilised by employees in their everyday work. This was one of the frustrations and gaps identified in the strategic foresight literature, where limited knowledge existed about the informal practices of foresight undertaken by employees in their work. In addition, reflection appears to play a very important role in allowing employees time to engage with their IF in situations where outcomes may benefit from IF ability.

Finally, in relation to cognition in IF, tacit knowledge was identified as a sub-theme of the cognition emergent theme. Although only explicitly expressed by four participants the risk associated with not making tacit knowledge more visible and accessible to other employees has been discussed and identified as an important need for IF development in others, and more broadly, in knowledge sharing and management in organisations. Comments such as *Byron's* highlight this issue, *"Quite often, in my little world - in my little mind - I'm going so fast thinking about things that I fail to - to relate it to the next guy and explain the situation that I have in my head."*. While there are many situations where tacit knowledge is not shared and does not result in any harm or situations of safety for others, there are also instances where shared tacit knowledge could prevent workplace incidents arising, or at least contribute to the de-escalation of potential incidents had vital tacit knowledge been accessible to others. Overcoming the issue of tacit knowledge in organisations, and understanding the value of shared knowledge, are issues that will be further explored in chapter eight.

6.1.3.2. Reflection

As the analysis has revealed up to this point, reflection is expressed through many participant experiences as an essential component of IF. Reflective practices in IF were somewhat expected to emerge in the Phase Two data following the insights gained in Phase One (where *reflection in IF* was raised consistently by all HRM professionals), and the requirement in the foresight process for humans to partake in mental time travel through either *remembering* or *imagining*, as discussed in chapter two. 25 of 27 participants (over 90%) in Phase Two contributed to the reflection data.

Given its prevalence in the IPA analysis, a matrix coding query is shown below to help visualise the prevalence of reflection across other superordinate and emergent themes of the IF experience (see Table 6.1). The highest frequency themes have been included:

Table 6.1 NVivo Matrix Coding Query for Reflection (*N* = number of codes)

Emergent theme / sub-theme	Reflection (*N*)
Reflection	94
Developing understanding	49
Individual Skills and Disposition	41
Personal Knowledge and Experience	30
Cognition	29
Learning Collaboratively	29
Personal learning from past experience	27
Organisational culture	22
Personal ability to assess or prioritise a situation	20
Emotional intelligence	19
Intuition	15
Sharing knowledge	14
Communication with others	13
Developing others	12
Planning	10
Future-thinking	9

As anticipated, the activity of reflection is a key contributor to how participants develop understanding through their IF experience. *David* demonstrated this when talking about a difficult situation he encountered at work where he felt he needed to learn to improve his response in the future. Interestingly *David* refers to his personal knowledge and experience (*"previous scenario"*) as part of his reflective process:

> *"[ ] normally talking it through, following up is a really good kind of point of reflection [ ] because this world can be repetitive, similar scenarios keeping coming up [ ] it's easy to reflect on a previous scenario, because it probably wasn't that far away from when the new scenarios occurred - and even relate back to it." David*

Geoffrey provided a poignant reflection example where his individual skills and disposition such as his ability to assess or prioritise a situation (e.g., *"consider each of the individuals…the lens that they may view"*) as well as his cognition skills (e.g., *"in a very short period of time in my head"*) and ability to think about the future (e.g., *"projecting my thought process forward"*) were activities he utilised in developing understanding (also through using scenarios) to improve his IF in a matter of *"seconds"*:

"[ ] if I'm going into a conversation [ ] I'm projecting my thought process forward [ ] I guess in a very short period of time in my head sort of seconds not minutes, I just developed over time the ability to almost like picture a scenario [ ] say a particular slide of the presentation, I'll look at that and I'll consider each of the individuals in the room and I'll consider the lens that they may view that content through." Geoffrey

Geoffrey's description also implies he drew on his personal knowledge and experience of each of the attendees as he reflected on the "lens" they might see the situation through. This is a good example of the multi-faceted nature of reflection and IF and the ability of humans to move through this complex process in a very short period of time; taking into consideration their existing knowledge and experience, drawing on emotional intelligence and, arguably, using intuitive decision-making given the shorter timeframe in which *Geoffrey* expressed he made his decisions.

In terms of the role of reflection in learning collaboratively two different scenarios were common in the data. First, a formalised process of group or team reflection provides an opportunity for collaborative learning and IF development to take place – where developing others is the outcome…

"We sit down [and] we look at things that were done well, things that we can improve on, and [ ] what can we do in the future or think we can be better at [ ] we do talk about that as a team." Leo

Second, and more common among participant experiences, the desire to work through a problem or scenario with others was valued by participants. Seeking out a trusted colleague or team members allowed participants to test out new IF ideas or proposed solutions to a problem. *Matt* demonstrated this: *"[ ] And then I can talk to my colleagues about that [ ] there's probably some things that maybe I haven't thought of.".* In terms of networking's role in organisations in learning, this example highlights potential practices that could be instigated by HRM professionals to foster foresight among workers.

Personal knowledge and experience emerged as key contributors to reflection. Much of the foresight literature about IF focuses on the ability for humans to reflect on previous personal experiences (episodic memory) to remember, imagine and mentally project

themselves into the future – thus, this finding was expected by the researcher. Numerous examples pointed to this phenomenon, but *Ronnie's* experience demonstrated this well:

"[ ] I've been doing it for such a long time now [ ] I actually look at my mapping before I even get on site, read my notes, see where it's handy? [ ] I do my groundwork before I even get on site [ ] I know my scenarios in my head so I get a focus on what I need to do."

Ronnie's references to having *"scenarios in my head"* and doing his job for *"a long time now"*, along with his action to take time before arriving at a scenario to reflect and consider his options, combines the relevance of his past experience with his ability to think about the future, reflect to generate scenarios, and ultimately to arrive at outcomes of his IF on the job.

An interesting observation about reflection related to the level of formalisation of organisational culture and resulting emphasis on regulatory controls. This issues emerged as an influential factor in reflection for employees. For example, *Alistair* mentioned above, the *"regulatory reporting aspect"* regarding his drive and reflection time on the way to his job, and *Bonnie* confirms this when she explains how she would *"sit down"* and think *"we are in an emergency situation, I understand the risk [ ] I'm going to observe and end up implementing a monitoring program [ ] and that's how we will demonstrate our mitigating factors to our regulator [ ]"*. Even more prevalent in these examples is the importance of ensuring certain positions in organisation adopt reflection as part of their work design. Without a reflective process being undertaken in their work, the outcomes of *Ronnie* and *Bonnie's* work situations may not have benefited from their IF.

Reflective practices often require a certain level of EI. Recent research examined the role of emotions in critical reflection, concluding that emotions are a valuable source of information and "a central part of reflexive work [which] can contribute to practitioners' (and researchers') analytical awareness…" (Herland, 2022, p. 673). In terms of this study, participants often utilised Emotional intelligence to inform their reflective practice, either knowingly, or subconsciously through their emotional awareness of self and others. Responding to a probing question about what might trigger heightened alertness when reflecting in a meeting, *Geoffrey* responded with, *"[ ] that lines up along with emotional*

quotient, or EQ [ ] for me [ ] I kind of picture myself as a third person sitting there watching the action take place, and essentially coaching me through that interaction [ ]". While this is an explicit example of EI utilised in reflection, *Leo* explained how he likes to reflect and gather all the facts of a scenario before reprimanding an employee for inappropriate action. He displayed EI through his display of empathy in his recount: *"[ ] sometimes you got to stop and smell the roses [ ] you don't want to be rude or disrespectful because you don't know where they're coming from.[ ]"*. An awareness of the value of EI to reflection, and the value of reflection to IF enables a more informed approach to development opportunities aimed at fostering IF in employees.

One final notable and significant phenomenon about the role of reflection in IF (which also emerged as important in the Phase One data) is the issue of time taken for reflective processes. Many participant excerpts demonstrate temporal differences in the reflective approach of employees. Understanding these differences allows a more accurate approach to educating employees about options for reflective practice in their work. *Rachel* emphasised the value of moving *"away"* from her work to *"[ ] digest it [ ] that's when, like the foresight. You know, I rummage around with it"*. One of the more poignant recollections for the researcher about reflection-in-action (which is when individuals question their actions while experiencing an event) (Schon, 1991) came from *Ronnie* who described needing time for reflection when arriving at a hectic site and incident for his work:

> *"before you can make a decision, you've got to have an understanding*
> *[ ] I was doing the risk assessment I turned to my truck [ ] everyone's*
> *behind me - and the jobs behind me [ ] and there's cars beeping and all*
> *that [ ] I just had a moment [ ] It's not long in the overall scheme of things [but]*
> *it can save you a lot of time in the long run - give you that focus. [ ] I always have*
> *that moment."*

Ronnie's example once again demonstrates how important these moments of reflection are for employees in their work. The final emergent theme findings in cognition, reflection, and future-thinking (2c) will now be presented.

6.1.3.3. Future-thinking

This section of analysis will cover the emergent theme future-thinking. In relation to the overall superordinate theme of *cognition, reflection, and future-thinking (2)* the analysis revealed that some participants use reflection time to think about the future and outcomes of their IF, so there was some duplication in the data for these two themes. An example of this was captured by *Anna* who, who works in the finance and insurance industry in an area with far-reaching potential consequences for most employees.

> *"I think having a conscious understanding of the impact of goal setting…and the behaviour that it can produce in us will go a way towards helping people understand the necessity for quiet time and backing off…and reflecting on what you're doing."*

The tendency for participants to refer to future-thinking was evident in over 90% of participant interviews. Given the foresight definition that was drawn from the literature review (and which guided the IPA interview process) makes three references to future thinking (*…the ability of humans to imagine <u>future</u> scenarios by … planning future actions and assessing these actions to determine future success*) it was not surprising to see the prevalence of data focused on this theme.

As described above for reflection, future thinking was closely associated with a number of other superordinate and emergent themes. One sub-theme of future thinking was *immediate versus future thinking* by participants, where participants referred to thinking ahead of time. The significance of immediate versus future thinking is reflected in the foresight definition provided earlier. To imagine and plan future actions, and then assess those actions, employees need to demonstrate an ability to mental time travel (*remember* or, in this case, *imagine*). One of the ways in which employees demonstrated their propensity to think about the future was recalling experiences where they had considered the impact of their decisions while they work (i.e., thought about the future implications of their decisions).

The researcher noted that when employees talked about the implications of their decisions for the future, they either conveyed a concern for people (i.e., the impact of their

decisions on others), as demonstrated by John: *"[ ] so it was about thinking first moments ahead, [ ] am I able to help this person and this moment, and who is going to be able to help this person following those months?"*, or, they conveyed a concern for the business (i.e., a duty of care or concern for the reputation of the business), as shown by *Edward*: *"[ ] our xxx is always talking about being the cheapest [ ] so I'm always thinking [ ] safety, money, how to do it efficiently and safely. And that's why I guess those sort of things come running through my mind [ ]."*. There were many other examples where employees expressed concern for their colleagues or the business in terms of how they undertook IF. Some employees felt additional pressure from regulators which seems to influence their propensity to think about the future and any reporting requirements or personal risks associated with their job: *"With the more important stuff I write it in my diary. [I'm] just covering my behind [ ] because a lot of this stuff has legal ramifications [ ]"* (Jake). As discussed previously, certain job types may be established as requiring IF to ensure legal expectations are met. This knowledge will be important for HRM practitioners recruiting into highly regulated environments.

Organisational culture featured prominently in discussions about future-thinking. When reflecting on why this may be the case, the researcher felt the nature of future thinking encourages a bigger-picture view from participants in terms of thinking about the impact of their IF decisions and behaviour, therefore, they might have been more focused on organisational-level factors. In terms of thinking about the future, *Alan* was focused on organisational change efforts and the impact of communication on the way other employees thought in their work:

> *"[communicating] what this is going to look like in two months, is key to foresight because otherwise [employees] are just worried about what's going to happen tomorrow [ ]"* Alan

By proposing this foresight implication for communicating effectively, *Alan* implied that foresight can be developed in employees if they are aware of the implications of the change they are experiencing. Through good communication, the organisation is developing understanding of its employees, which encourages them to think about the future and the implications for their own work of the organisational change. *Sarah* refers to the significance

of culture in guiding her behaviour about 'speaking up' about certain issues as a result of her IF: *"[ ] if I hadn't gone oh no...I'm really scared to talk about this because this isn't the culture here to talk about these things and learn from them, then we'd be in a position where we're reporting [ ] about a breach of privacy."*. *Sarah's* reflection holds important implications for HRM professionals, as this is a good example of where the organisation needs to encourage a supportive culture for IF so that colleagues like *Sarah* feel safe raising issues that their IF has determined will have detrimental effects on the future of the business.

The other sub-theme identified for future-thinking was *personal foresight ability*. This theme may have emerged as a result of participants thinking about the future and then relating their thoughts to either their own or others' foresight ability. For example, some participants spoke about their own foresight ability when attempting to address issues they felt were important to the future. *Rachel* demonstrated this in regard to an important report she produced and hoped would initiate change, *"You know what motivated me to write that initial paper? [ ] it's a combination of the benefit for, [ ] the organisation [ ] the people working in the organisation [ ] our community particularly and demonstrating that we're capable [ ] "*. Not only does *Rachel* demonstrate her commitment to her organisation through her IF actions in this example, but this is also an example of Rachel acting on IF based on being passionate about a cause – a disposition discussed earlier in *individual skills and disposition (1c).*

Other participants showed concern about others not demonstrating the same foresight ability for future thinking in their work: *"[ ] they're not seeing the big picture [they've] sort of just got blinkers on [ ] it's about [ ] taking a step back [ ] this is what we're doing. This is why we're doing it"* (Leo). Each of these scenarios captures the ability or otherwise for employees to think about the future and the consequences of their IF for others or the business. While diagnostics such as the Consideration of Future Consequences (CFC) survey (Strathman et al., 1994) and the Futures Consciousness (FC) scale (Ahvenharju et al., 2021) (discussed in chapter 2) offer some insight into a person's propensity to consider future consequences of their actions, utilising such scales has been outside the scope of this study. Opportunities exist to conduct research of this nature in organisational

contexts to assess the relevance of these tools in predicting IF ability. There appear to be many benefits for organisations when their employees feel supported and encouraged to think about the future when undertaking work. However, as this analysis has revealed there are differences in employee ability or propensity to think about the future in their work, and according to participant accounts, also variation in how supportive an organisation's culture is when encouraging (or otherwise) insights gained from future-thinking and / or the outcomes of IF.

6.1.3.1. Summary and interpretive conceptual map of cognition, reflection, and future-thinking (2c)

The analysis for *cognition, reflection, and future-thinking (2c)* comprised some very significant individual contributors for the IF process and insights into how employees actually undertake the process of IF in their work. Figure 6.7 represents the associated relevant factors of cognition, reflection, and future-thinking in IF, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 6.7 Interpretive analysis of superordinate theme cognition, reflection, and future-thinking (2c)
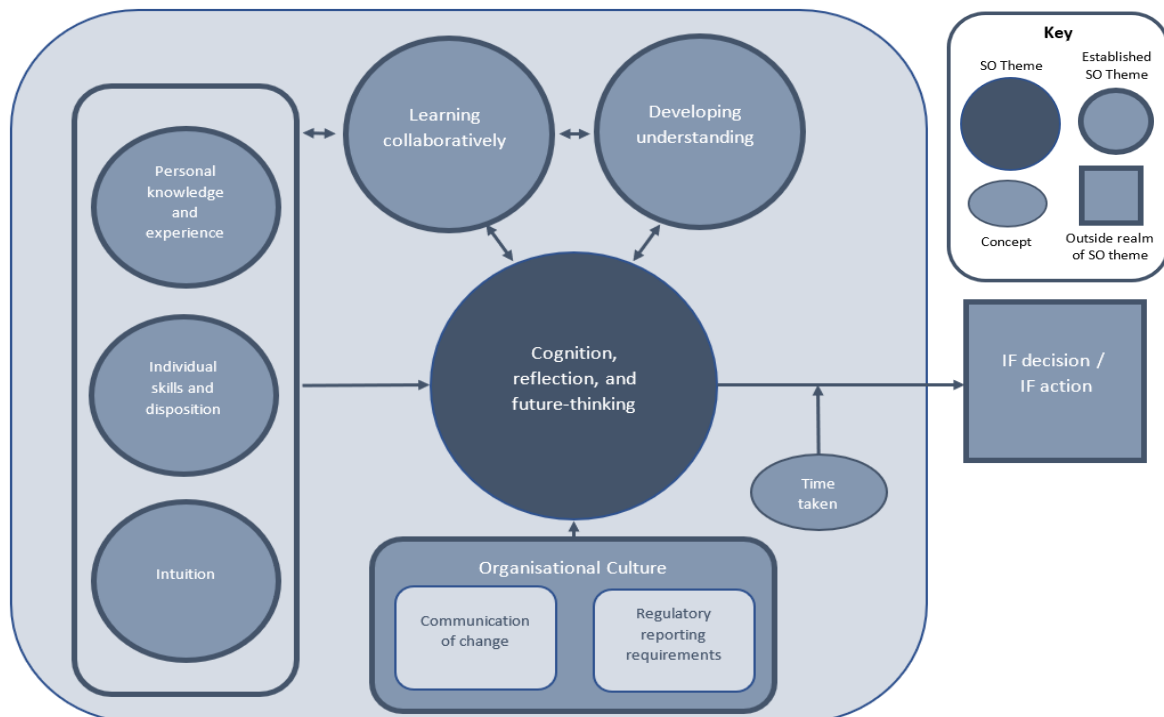
In summary, engaging in IF involves three important elements of cognition, reflection, and future-thinking. The personal knowledge (often tacit) and experience that an employee brings to this process, in addition to their skills and disposition (e.g., level of emotional competence, ability to assess and prioritise situations, passion about their cause) influence the way they process information cognitively by various means of problem solving and critical thinking. Often employees seek moments of reflection in order to be able to recall (remember) important past experience or knowledge, or undertake reflection as part of their current situation, and use this time – which can happen both intuitively and over longer periods (e.g., 'stepping away from the issue') to think about the future consequences of their IF. This process is complemented by collaborative learning opportunities, where employees call on network contacts to fill gaps in knowledge. All of these factors contribute to an understanding about the IF situation being experienced and lead to outcomes associated with IF. Outcomes can be influenced by cultural factors associated with job design (e.g., highly regulated jobs demanding greater future-thinking for reporting aspects), change processes being undertaken that influence employee's future-thinking propensity (if communicated well), and other cultural factors to be discussed in chapter seven.

7. Phase Two IPA Results Chapter III

7.1. Overview of the chapter

Chapter seven is the final Phase Two results chapter. It introduces the results for the final four superordinate themes that emerged from interviews with participants about their experience with IF. Three of the themes *organisation policies and procedures (3a), decision (3b),* and *taking action (3c)* emerged as "The Outcomes" of IF, while the final superordinate theme *organisational culture (4)* explained "The Context" in which participants experienced IF in their organisations.

7.2. Individual-level contributors of IF: 3. The Outcomes

Findings of the IPA analysis revealed three individual-level contributors (superordinate themes) related to the outcomes of IF: *Organisational policies and procedures, decision,* and *taking action.* These three superordinate themes did not comprise any emergent themes (see Figure 7.1)*.*

Figure 7.1 Individual-level contributors related to IF outcomes
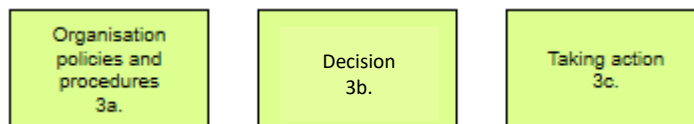
7.2.1. Organisation policies and procedures (3a)

The description for superordinate theme *organisation policies and procedures (3a)* was:

> **Participants describe the role of formal work systems and processes, policies and procedures that facilitate or guide work outcomes during an incident or event.**

Organisation policies and procedures was the smallest of the emergent themes in terms of number of participants who contributed to the theme (9 out of 27) and number of references within interviews (26) in the Phase Two data. However, the researcher

established this theme warranted inclusion in the superordinate themes due to the potential importance of an organisation's approach to promoting the use of formal work systems and processes over or alongside IF – following the experiences of Phase Two participants captured in the data.

It has been established that some participants experience higher pressure from regulatory controls due to the nature of their job role and the industry in which they work. The need for these employees to think about the future as part of their jobs and to meet regulatory requirements has also been established. These issues emerged again in this theme as they predictably shared coding with the same or similar excerpts from the interviews. For this reason, this section of the analysis will focus on new insights related to the theme of *organisation policies and procedures (3a)*.

Firstly, it was observed that organisational culture can create conflicting expectations or priorities for the business and employees if the organisation's policies and procedures do not align with regulatory expectations, employee experience and the existing culture and expected employee behaviour in certain situations. This was experienced by *Bonnie* who described her experience with an issue in which she utilised her IF to respond to a situation as follows:

> *"[ ] so I responded on the callout [ ] however, [my workplace] hadn't implemented [ ] that type of [response] before [ ] my experience leading to [the] outcomes [ ] was very much in conflict with [my workplace's] position as a business - which obviously resulted in, you know, no consultation [and] our regulator was then highly concerned [ ]"* Bonnie

Bonnie's experience of utilising her IF was a negative one in terms of feeling unsupported by the business because of the lack of congruence between the required regulatory controls and formal work systems and processes. This highlights the value of ensuring appropriate organisation policies and procedures are in place, and that organisations support IF decisions and actions made by employees like *Bonnie* to ensure compliance with regulators and to avoid future implications associated with this.

Secondly, and stemming from *Bonnie's* experience discussed above, *Bonnie* shared her view that formal work systems and structures should be accurate, up-to-date, and able to

assist employees who don't necessarily possess the same personal knowledge and experience as other employees. *Bonnie* explained this salient point – that less-experienced employees should be able to rely on correct systems and structures to support their actions and decisions when their own IF fails due to a lack of personal knowledge and experience:

"I've started to develop [processes and guidelines] particularly when people who make these decisions don't have the environmental or health qualifications. [ ] knowledge and experience is important - but I'm more systems and processes orientated. I would love to see [ ] the systems and processes [ ] in place to enable anyone with any skill set to be able to execute a task. And that's because I've got so much – insight into how to do that." Bonnie

The third sub-theme that emerged for *organisation policies and procedures (3a)* related to a similar issue regarding employees who lack experience and knowledge. *Darren* identified that a shortfall in appropriate employee training sometimes results in employees making decisions that breach formal work systems and processes. *Darren* demonstrated his own IF and an opportunity to develop IF in others (potentially through collaborative learning and supportive leadership or mentoring) through his comments, *"[ ] there's no point in saying, well, you didn't follow procedure - if they don't know about it! [ ] how can they fix it? That's my foresight really...it [training] will improve the culture - it will improve the trust at [my workplace]."*. *Darren's* view should be considered in terms of organisations taking responsibility for the preparation of employees for work. This is not a new responsibility for HRM professionals, however, in the context of fostering IF behaviour, training will be important to ensure this issue is addressed.

Another interesting sub-theme that emerged was when some participants expressed that they felt their own IF and intuitive decision-making led to better outcomes than strictly following the organisation's policies and procedures. *Ronnie* and *Jake* both described detailed incidents where their own IF led to positive outcomes for the business, however, didn't strictly follow the normal expected procedure. The descriptions of their experience were detailed; however, a summary of *Ronnie's* explanation demonstrates this experience, *"[ ] we do have a procedure to follow, however, it comes down to [being] more instinctive [ ] knowing what to do [ ] you have to prioritize what you have to do. But a lot of it does comes*

instinctively.". The positive outcomes associated with these employees' actions have arisen from the use of their own IF and intuition. Taking into account findings thus far, this may demonstrate that unique work scenarios require unique solutions determined by an employee's IF that draws on their personal knowledge and experience, ability to think about the future and other related skills.

Finally, one of the participant's responses stressed the importance of capturing and sharing IF insights within organisation policies and procedures. This issue emerged when discussing the tendency for participants to record information in the IF process and is valuable in the context of KM and IF. When prompted to describe when and how the IF of team members is captured, *Hugh's* response (below) was detailed and reflective, and highlighted his motivation behind formalising IF into "checklists" – which he claimed is about capturing the information to refer to in *"high intensity moments – when you've got a lot of things going on"*:

> *"[ ] it happens both during the incident to some degree and certainly*
> *afterwards - you know, as things start to calm down [ ] I'm going off to*
> *make a cup of coffee for a minute [because] I want some quiet moment[s]*
> *just to consider all of those things that I've been mentioning [to] think*
> *about maybe subconsciously [ ] - back to other scenarios, you know, "have*
> *I done all the things that I did in this event?" Subconsciously checking those*
> *off. And then at the height of the event...I think is where we then translate*
> *those more standardised business processes - you sit down and go, okay -*
> *we need to make sure we do these things next time - and try to get that -*
> *not just rely on foresight I guess - because it can fail you I think [ ] in high*
> *intensity moments - when you've got a lot of things going on..."*

This salient excerpt illuminates the important role of KM in firms when utilising IF and reminds organisations that humans are not infallible, they can experience cognitive or information overload that can negatively influence the effectiveness of their decision and outcomes of a situation (Phillips-Wren & Adya, 2020).

7.2.1.1. Summary and interpretive conceptual map of organisation policies and procedures (3a)

The analysis for *organisation policies and procedures* comprised important insights regarding participants' own experience and perceptions of how IF can and should contribute to organisation policies and procedures. Figure 7.2 represents the associated relevant factors of the experience with policies and procedures, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 7.2 Interpretive analysis of superordinate theme organisation policies and procedures (3a)
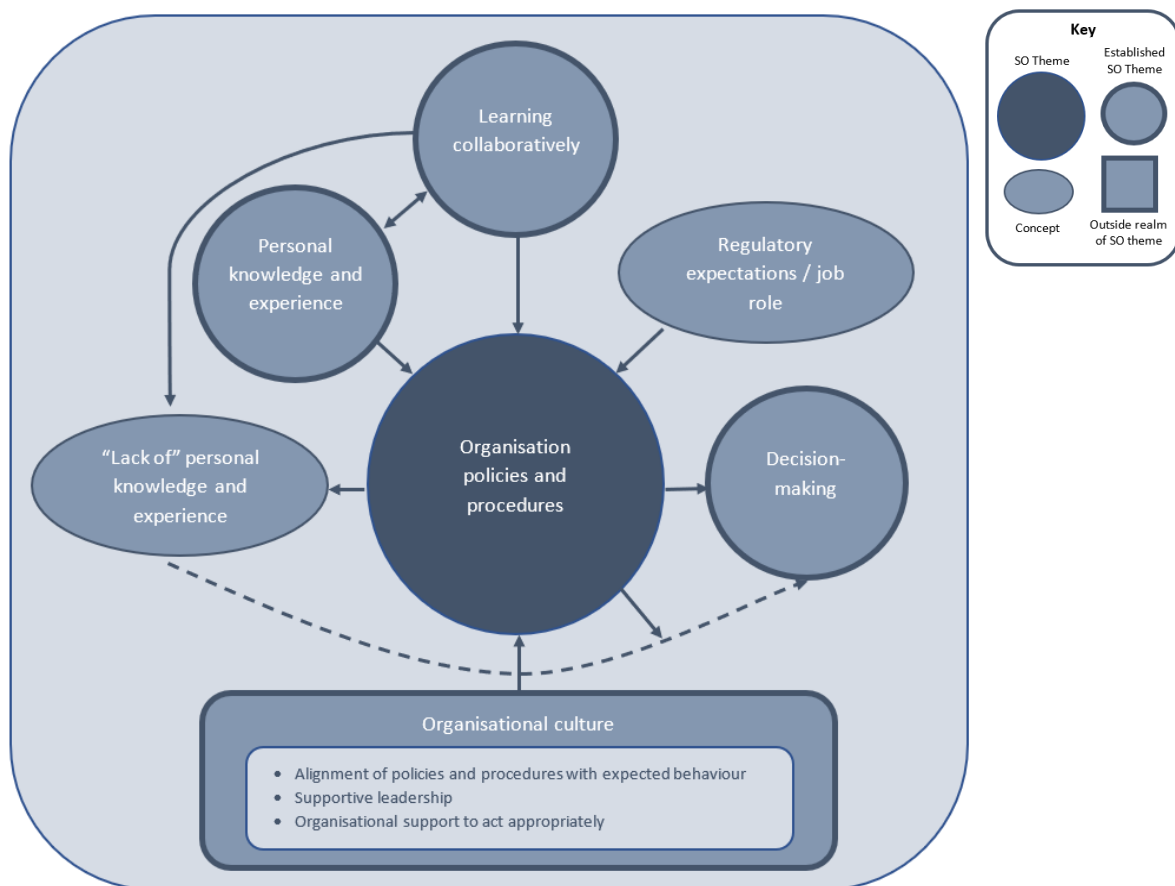
In summary, participants identified the important role of policies and procedures in providing support to employees who may lack IF due to limited knowledge and experience with the organisation. Collaborative learning (e.g., mentoring) and training opportunities play a role in communicating existing policies and procedures and performance

expectations to newer (and existing) employees to support appropriate IF outcomes in their work. In addition, organisations should recognise and ensure that existing policies and procedures play a role in supporting appropriate IF outcomes of employees, and are congruent with expected, positive IF behaviours and outcomes. This recognition should be supported by leadership and an organisational culture that encourages and values appropriate IF behaviour and insights of experienced employees willing and motivated to comply with policies and procedures that meet the expectation of regulators where applicable.

7.2.2. Decision (3b)

The description for superordinate theme *decision (3b)* was:

Participants refer to moments when they've made decisions related to a process or action they are planning to take.

The complex nature of decision-making and its multi-faceted role in human cognition presented a challenge to the researcher in terms of its positioning in the theoretical framework for IF. "Decision" for the purposes of this study is positioned here as an outcome of IF. However, decision-making also takes place in the process of IF and has been argued as an individual-level skill of employees (Klein, 1997a). Because of this complexity and the many times decision-making features in the IF experience, its substantive role in IF resulted in its subsumption as a superordinate theme. Decision-making holds significance in terms of the insights to be gained about the way in which individuals make decisions, and the experiences they have when making those decisions in the relation to IF in organisations. As expected, decision making aligned with other superordinate and emergent themes of individual skills and disposition (i.e., the ability to assess and prioritise tasks), future-thinking (considering the impact of decisions) and developing understanding. Two of the more intriguing aspects of decision-making emerged when considering collaborative learning, and also how employees describe moments of reflection in decision-making.

Data contributed to 'decision' when participants specifically commented about decision as part of their experience of IF or relayed in detail an incident in which they

recalled relevant IF experiences that contributed to their decision. For example, *Byron* referred to the role of intuition, personal knowledge, and experience, and assessing and prioritising tasks in decision-making when he stated, *"I guess intuition to a degree - you might call it experience. I don't know if I believe in seeing the future - but I believe in assessing the situation, making a judgement about where it's going [ ]"*. As discussed previously, personal past experience contributes to employees' intuitive decision-making in IF, and intuition has been established as a key contributor to the decision outcomes of IF.

Referring back to *individual skills and disposition (1c)* EI was established as an important competence in the IF process. In terms of decisions, EI also emerged as a major contributor in the IF experience, in both personal considerations for decisions that involved empathy, *"[ ] sometimes you have to make decisions that are more than just about yourself"* (Gill)*,* and on the many occasions in which employees thought about the outcomes of their decision and the impact it may have on either others or the organisation, *"even when I'm investigating a case [ ] and I've had to write my report [I know] what I say in that report is in black and white forever [ ] and will guide how it's precedented in the future."* (Marie). *Marie's* comment not only demonstrates the presence of EI in decisions in the IF process, but also highlights Marie's inherent need to think about the future in terms of her work outcomes (i.e., policy development). This finding points to the value of future research investigating the role and importance of future-thinking in certain job types.

Howard works in a central decision-making role in an area of the business that manages incident responses. As such, it was beneficial to analyse his approach to decision-making and recognise not only some of the expected stages of decision-making in his recount of a major incident, but also the contributory factors that could be associated with his IF:

> *"[ ] when you've been in the xxx business, as long as I have, you know, you've seen this before. [ ] you recognize it's a bit of a heart stopping moment because you recognize [ ] the potential impacts on the customer - and the fallout for the company [ ] so the first thing you do is contact the incident control room, you let them know that planning is organised [ ] we've started looking at short term solutions, and we'll start feeding information into the incident management team [ ] that's the first phone*

*call, then the second phone call is to organise the troops [ ] and then once
we understand the situation [ ] what are the options [ ] we start looking at
features that could be opportunities to us in the network." Howard*

Evident in *Howard's* recount are several of the steps involved in decision-making such as identification of the problem - taking the phone call and expressing, *"it's a bit of a heart stopping moment"*, identification of decision criteria – *"start looking at situations [ ] understand the situation"*, development of alternatives – *"what are the options"*, analysing those alternatives – *"start looking at features"* and then, moving beyond this reference – the arrival , implementation and evaluation of multiple solutions in which *Howard* and his team implemented – and were captured in his full interview. However, there are other important observations in terms of examining Howard's IF experience.

Several themes emerging from the Phase Two data were also evident in Howard's recount. For example, when recounting this incident, *Howard* first refers to his personal knowledge and experience - *"when you've been in the xxx business, as long as I have, you know, you've seen this before [ ] you recognize, you know, the difficulties in the situation"*. His reference to *"the potential impacts on the customer"* indicates his ability to think about the future, his decision-making steps imply he is able to assess and prioritise situations and develop understanding, his action taken to *"contact the incident control room"* to keep them informed, indicates collaborative learning through the insights he provides to inform and develop understanding for others involved in the situation. *Howard's* case is a useful example to understand the significance of emerging IF themes to the outcomes of 'decision' in IF. However, reflection didn't feature as part of *Howard's* recount, where it did in others who discussed decision-making.

Brad referred to the frustration of others not taking time (to reflect) to make better decisions at work, highlighting again the value of reflection in the IF process as expressed by participants: *"They've [managers] got to be able to interpret stuff really quickly [but] the hairs on the back my neck stick up when I see [them] making decisions [when] "I haven't told you all the information yet!"*. *Ronnie's* comment about time taken to pause before making a decision pointed at the challenges and value of taking that time: *"[ ] sometimes like you're going 100 miles an hour [but] actually taking 10 seconds sometimes feels like a long time -*

sometimes I just do that [ ]". He identified the challenges: *"it's hard to do because everything's going at once"*, but also the value of taking this time, *"[ ] actually doing that creates better decision making and, and helps you prioritize what's important"*. The value of reflection in decisions is highlighted by many of the participants and should be considered (as previously noted) an important consideration in HRM practices aimed at fostering and nurturing IF ability in work.

Collaborative learning, reflection (through drawing on past experience) and 'decision' shared many moments in the transcripts as conveyed by *Howard's* description below:

> *"[ ] when you think back on past incidents, the temptation is to rush [ ] so we had to keep reminding people, check. Have you done this? [ ] we rely on the collective wisdom of the group [ ] and then we make a decision"*

Howard's example of decision demonstrates the multi-faceted nature of decision-making and its complexities and links with other IF attributes, for example remembering, reflection, learning collaboratively and developing understanding. Understanding that employee decision outcomes benefit from their IF ability and the multi-faceted nature of the process undertaken in IF is valuable to organisations wishing to utilise IF in their business processes and outcomes.

7.2.2.1.   Summary and interpretive conceptual map of decision (3b)

The analysis for *decision* revealed many valuable insights regarding how employees arrive at decisions based on their IF ability and experience. Figure 7.3 represents the associated relevant factors of decision in IF, as experienced by individuals in organisations, and interpreted by the researcher.

Figure 7.3 Interpretive analysis of superordinate theme decision (3b)
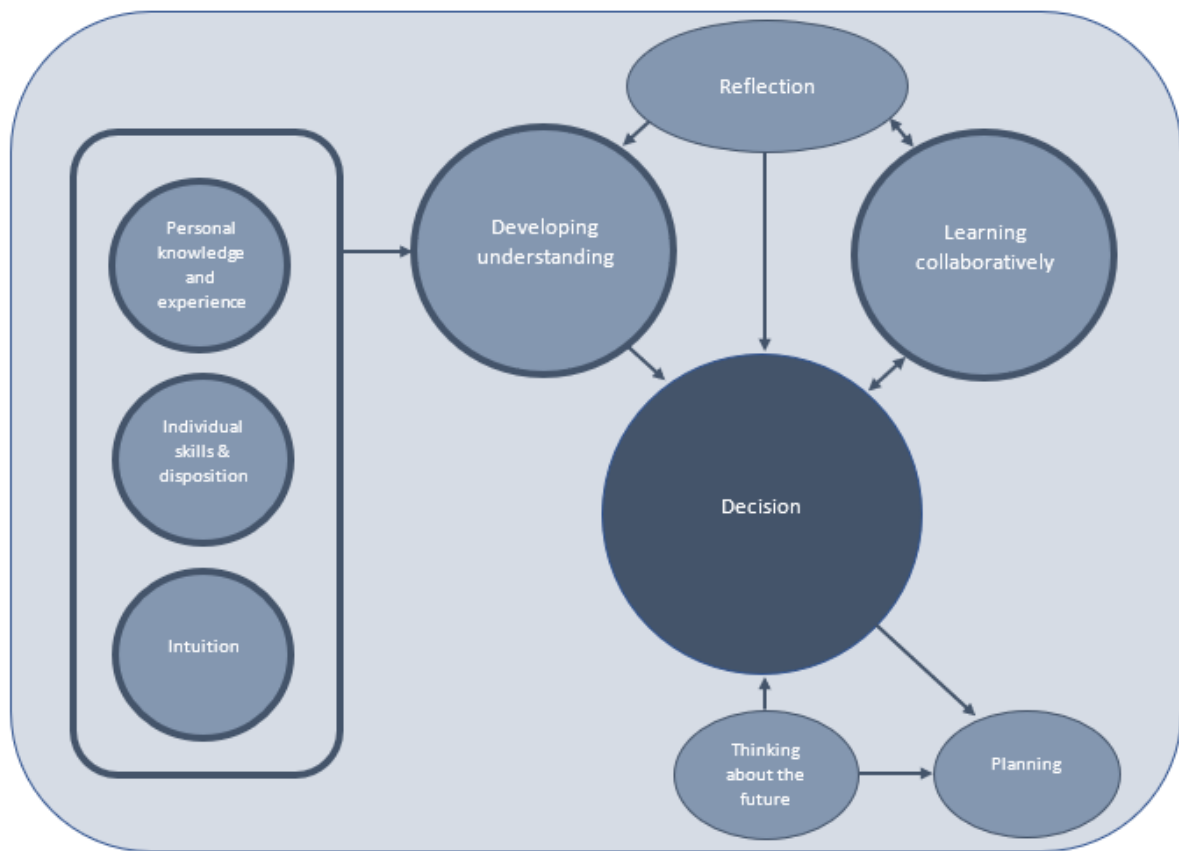
In summary, an employee's knowledge, skills, disposition, experience, and intuition are all important individual-level contributors to the process undertaken in foresight, which results in a decision outcome. Through their own knowledge and experience, and where required – the knowledge and experience of others (through collaborative learning opportunities) employees utilise their IF to develop understanding of their situation. Their level of experience, the time available, and opportunities for reflection may impact employees' propensity to draw on intuition and/or other competencies such as EI or cognition skills, to think about the future and consider potential implications of their IF decisions on other people or the business. These decisions could inform future plans regarding how employees work or the implementation of new policies or procedure resulting from IF outcomes.

7.2.3. Taking action (3c)

The description for superordinate theme *taking action (3c)* was:

> ***Participants detail the actions and interactions they undertook in uncertain conditions to work towards a solution for a situation or incident.***

As demonstrated through the examples in future-thinking, the data for taking action aligned closely with data from developing understanding and learning collaboratively. This seems logical to the researcher given employees need to take action in some way in order to bring about understanding or learning in others. However, the reason not all participants were coded to this theme (only 10 of 27 participants) was because of the nature in which the actions were taken, and the theme was defined. For example, to be included in this theme employees often faced potential situations of adversity – or placing themselves at risk – by acting on their foresight, with implications identified as a result of employees taking action under these circumstances.

One case saliently highlighted the issue of taking action in a situation of uncertainty, or risk. This case remains vivid in the researcher's recollection due to the way the participant, *Alistair*, was emotionally moved during his interview, and the motivation and passion he conveyed regarding why he took the action he did. *Alistair* described a random opportunity he had to join an event that takes place in his workplace to facilitate connection between workers at the coalface, and the Chairman - several organisational layers above, or as *Alistair* explained in his own words, *"there's a fair few people between my role and the chairman of the organisation"*.

During this event, Alistair found himself in a rare situation with an opportunity to discuss a major operational safety issue in which he had experienced limited success in conveying to executives for some period of time. When approached by the Chairman of his company, Alistair's initial response when asked how everything was going was "everything's running like a Swiss watch", to which the Chairman replied "bullxxx - now tell me the truth!". Alistair's initial 'positive' response to this question was a result of him fearing the consequences of his actions (discussed in the next results section 7.3) as explained in his

recount below, however, he was encouraged to be honest, demonstrating a level of openness and approachability by his chairman. In his interview, *Alistair* was asked to describe his emotions when he made the final decision to be honest with his boss about his IF about the serious issue facing his workplace and colleagues:

> *"I did hesitate long enough to consider to what degree I should disclose the information [ ] there was conscious thought there about how - should I just open up and be honest and tell him everything that I'm aware of - or should I try to brush it off and sort of tiptoe around the real issues. And then, what it basically boiled down to* [pause as emotion overcame participant] - *was looking after the people."*

Alistair did choose to disclose his concerns to the Chairman of his company, and explained how he felt before and after the Chairman's response:

> *"I thought, here's a go, I'm going to get slayed because I've talked directly to the chairman - and brought to his attention a major issue of major significance that he's completely oblivious to. But he, he was very appreciative. He made me feel comfortable that there'd be absolutely no repercussions for me talking openly and honestly to him. So, that was – reassuring [ ]"*

There are many observations to be taken from *Alistair's* recounts about this event. In terms of *Alistair's* Individual skills and disposition, his personal level of risk-taking and level of confidence played a role in how he felt about speaking up about the issue. *"I'm going to get slayed"* indicates *Alistair's* level of fear, however, also evident was *Alistair's* passion about a cause – looking after "the people i.e., the thought of harm falling on his team made him emotional, and his ability to reflect (*"I did hesitate long enough"* Alistair)– to consider all of these things and the implications. From an IF perspective, *Alistair* displayed an ability to think about the future in terms of the issue he highlighted (a safety issue that could cause harm if not addressed in the near future). He actioned his IF – arguably because of the level of commitment / passion he had for his team. In addition, *Alistair* also demonstrated a significant level of EI, demonstrating self-awareness in the moment, and also considering how the message might impact the Chairman (i.e., having empathy from his perspective). *Alistair* was also able to assess and prioritise the situation both from the perspective of taking the opportunity to speak up, but also knowing there was an existing situation that needed addressing.

The final results section 7.3 will discuss the context in which *Alistair's* IF took place – the organisational culture, however, in light of the example provided, it is worth reflecting here about the leadership style of the chairman. He seemed approachable, (i.e., made himself available to the 'workers' and encouraged *Alistair* to speak up), supportive *("…he was very appreciative. He made me feel comfortable…" Alistair*) and demonstrated a level of trust with his follow-up response *("on everything he committed to - he delivered." Alistair*).

Alistair's case was one among 27 participants, however, the essence of his experience is both representative of many of the themes already explored in the Phase Two data, as well as the other stories relayed by Phase Two participants about how and why they took action on their IF. Other examples highlight where employees took action on their IF despite a perceived risk to their own reputation. *Anna* demonstrated her focus on future thinking, utilising EI and considered the impact of her actions (drawing on her experience) when she explained, *"I knew that I could do something for them [ ] because of my experience [ ]"*; and *Byron* referred to his past experience and consideration of outcomes for the business (future thinking) when he chose to report a maintenance issue that senior management had previously poorly managed, *"I have made some recommendations - to temporarily get us out of trouble - once again that's from experience."*. *Stephanie* described a scenario where she perceived a gap in her knowledge challenged her reputation as a relatively new employee, however, her confidence – gained from experience – as well as the time taken for reflection to develop her knowledge, contributed to her IF ability, *"I was feeling pretty confident [ ] I'm a bit of a reflector [ ] I'll go away and [ ] think about things [ ] before I respond."*. *Janelle* actioned her IF when her passion and future-thinking about the company's reputation motivated her to save the company from a breach of copyright risk, *"[ ] I jumped up and down and up and down up and down politely until somebody listened to me - like there's real risk!"*.

These examples demonstrate the good will and commitment of employees to act in the best interests of their organisation and/or colleagues when their IF results in outcomes that may not necessarily benefit themselves, however, a lack of action could result in negative outcomes for their colleagues or the business. HRM professionals should understand this level of commitment and loyalty demonstrated by employees, and establish

policies, practices and a culture that supports and rewards the actions of those acting on their IF in the best interests of others or the business. This is another implication for HRM practice in terms of the outcomes of this research and will be discussed in chapter eight.

7.2.3.1. Summary and interpretive conceptual map of taking action (3c)

Figure 7.4 represents the nature of commitment participants demonstrate when taking action (3c) on their IF to protect their organisation or fellow colleagues.

Figure 7.4 Interpretive analysis of superordinate theme taking action (3c)
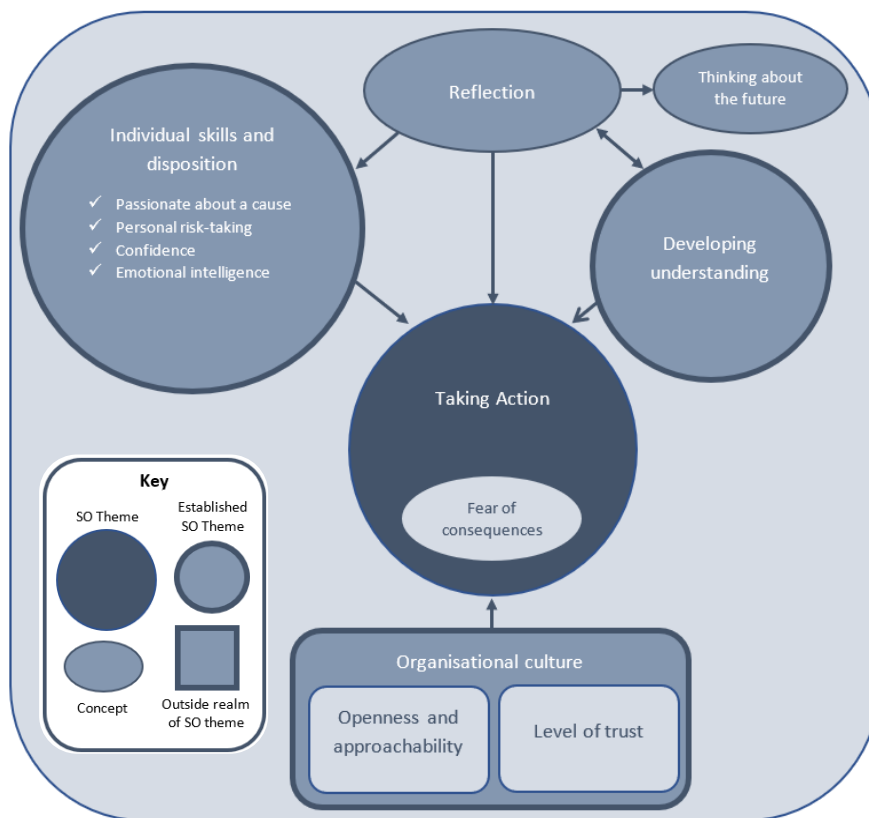
In summary, the propensity of an employee to take action on their IF insights is often noted in employees who demonstrate a passion for a cause, are willing to take a personal risk for the benefit of others or their organisation, demonstrate a level of confidence in their IF, and utilise their EI to manage often-difficult situations in which they are delivering difficult information for the organisation to receive. Employees take action when they have thought about (reflected through a process of thinking about the future) and considered the consequences of their action or inaction for their business and colleagues. Organisations can negatively influence an employee's intention to act on their foresight by instilling a culture

of fear in terms of the potential consequences of voicing one's IF. This could hold huge implications for whistle-blower support in organisations and highlights the need to foster a culture that rewards and celebrates IF outcomes that hold potential benefits for the business. Chapter eight will now explore the final, and one of the biggest superordinate themes of the study – organisational culture.

7.3.   Individual-level contributors of IF: 4. The Context

Findings of the IPA analysis revealed the individual-level contributor (superordinate theme) related to the context of IF as *organisational culture.* This superordinate theme comprised fifteen emergent themes explored throughout the analysis (see Figure 7.5)*.*

Figure 7.5 Individual-level contributor related to IF context and associated emergent themes
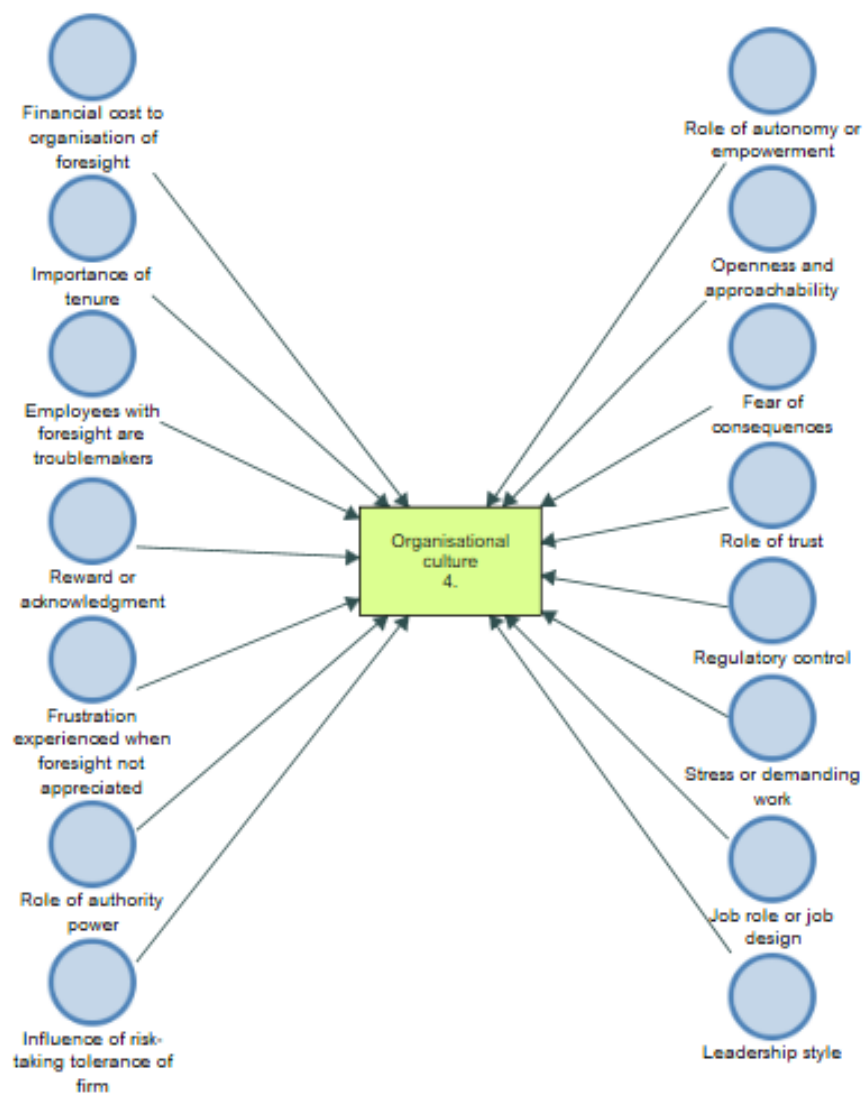
7.3.1. Organisational culture (4)

The description for superordinate theme *organisational culture (4)* was:

Participants refer to any aspect of the organisation to do with how people act and behave, the way leaders interact, how behaviour is rewarded or punished and more.

As expected, following the Phase One data outcomes, *organisational culture (4)* was a significant contextual influencing factor of IF experience for all 27 participants in Phase Two. Drawing on Phase One's analysis, culture revealed three major contributors discussed by the HRM professionals: *Trust, supervisor/leadership influence* and g*roup conformity*. It was anticipated by the researcher that Phase Two would explore these issues further, but possibly reveal several other important organisational cultural factors that might influence an employee's experience of IF. This was definitely the case for Phase Two, with the superordinate theme of organisational culture capturing the largest numbers of references in the Phase Two data set and revealing both *trust* and *leadership style* (from Phase One outcomes) as important contributory factors to the experience of IF. The issue of *pressure to conform* as a barrier to IF, as discussed by HRM professionals, was interestingly not evident in Phase Two data – which bodes well for IF in organisations. Each of the 15 emergent themes for organisational culture will be explored below, however, themes that the researcher felt held particular significance for participants are represented with more background detail due to space limitations of the thesis. It was also decided not to segregate each emergent theme due to the inter-related nature of organisational culture issues.

References to leadership style were representative of over 89% of the participants. Participant experiences reflected how leadership style and/or behaviours can influence foresight in the workplace. Supervisory relationship featured as a sub-theme of leadership style where reflections were mostly about the participant's direct leadership/supervisory relationship with their own team and how they encouraged a certain style of learning or behaviour to build foresight – or the relationship participants had with their own supervisor and how this impacted participant foresight: *"I have had a supervisor before I was one [ ] he would turn up to a job and he'd say "Right - this is how I want it done"...and you'd go 'well*

that's a stupid way to do [it]' [ ] dare mention that, or dare do it not the way that he wanted it done [ ] you'd get yelled and screamed at [ ]" (*Vincent).

This excerpt demonstrates the detrimental effect that leaders can have on an employee's foresight when not being encouraging and open-minded to employee's IF abilities and outcomes. Openness and approachability of leaders was found to be important in the earlier example of *Alistair* reaching out to the chairman after his leader was encouraging and supportive of his foresight outcomes.

In addition to leadership style, job role or job design featured in over 65% of participant interviews in terms of how a participant's job may influence their propensity to use IF at work. *Amanda* reflected *"I don't think I'd apply a lot of that kind of long-term foresight there [ ] "* when referring to her current position where she updated systems and documents in her daily job. *Bonnie* reflected more broadly on the nature of jobs in her utilities business and whether foresight was needed at all *"I don't care where anyone sits to do any job [ ] the systems and processes should be in place to enable anyone with any skill set to be able to execute a task."*. This perspective could possibly reflect the highly-regulated science-focused environment *Bonnie* operates in and also highlights the emergent theme of *organisation policies and procedures (3a)* – which was covered previously. Regarding job role or job design *John* spoke in a similar broad sense about the IF behaviour of those he perceived as utilising foresight in their job, and the scope of their job in encouraging this: *"people who point out the risks or the opportunity [ ] ...it's having more of an ability or operating more in that space. A lot of that is defined by scope, scope of that person's ability and also that person's role."*. The variety of thoughts shared about job role or job design influencing an employee's opportunity, or the necessity, for them to use IF in their work demonstrated that job type is of interest in terms of IF ability needed.

Almost 50% of the participants spoke about the changing nature of using foresight in situations of stress or demanding work. *Alan* captured the negative impact of stress on foresight when he explained, *"[ ] when things get difficult, often that foresight kind of falls away [ ]"*. *Alistair* spoke of the foresight that emerged when he was in a stressful situation and under time pressure: *"[ ] we were under time pressure, but we ended up working out a*

solution [by] jumping immediately into solution mode [ ] I immediately initiated the emergency network intervention because I knew that was the action that would immediately stop the flow[ ]". Organisations will need to consider the impact of stress on employee foresight and consider the related cognitive or information overload which results in less effective decision-making (Phillips-Wren & Adya, 2020). As discussed in *organisation policies and procedures (3a)* one way organisations might address this is through the provision of up-to-date and well-supported policies and procedures that help overcome a lack of IF ability in certain situations (i.e., lack of knowledge and experience, or in this case, information overload). In addition, and as discussed previously, the same approach could support job roles where regulatory reporting requirements are high. Understanding different industry-specific or work environments to ascertain these instances will be important.

The role of trust in a supervisory or working relationship appears to be important in terms of encouraging or discouraging the use of IF. Almost 50% of participants spoke of this issue from different perspectives. Supervisors like *Byron* explained how his employees will only speak up about an issue or idea when they feel comfortable with him, *"It's not until they really become comfortable with you that they start sharing what they're seeing and what they're feeling"*. Other participants talked about the trust in them as an employee, and the influence this has on encouraging them to try new things, *"[ ] in research [ ] there's a level of trust in giving people space to move forward with ideas and apply them"* (Rachel). Several participants talked about the role of trust in collaborating with others to share information they considered important in their own IF process: *"I'll sense check that with someone else that I know [ ] and trust [ ] and then I'll do it with someone who's influential as well so I can even get a better understanding of the situation." (John)*.

The role of trust in organisational culture is well-researched. Trust is needed in organisations to encourage risk-taking behaviours that support creativity and innovation needed for an organisation to remain competitive (Neves & Eisenberger, 2014). Findings in Phase Two indicate that the role of trust in promoting openness and encouraging employees to act on their IF, is similar to the debate around fostering innovation and

creativity. This outcome in the Phase Two data supported the Phase One findings and views of HRM professionals and how they felt foresight could be fostered in their organisations.

Related to the trust, a fear of consequences by employees when they act on their IF, as well as the openness and approachability of people - and the work practices that promote this, featured in over one third of the interviews. *Edward* discussed his preferences for openness from his leaders, *"[ ] life isn't always what you want it to be, but I do respond better to more openness."* He went on to describe that some of the longer-term employees tend to withhold information for the purposes of remaining valuable, *"[ ] blokes [ ] that have been here a long time [ ] don't like to share that information because they feel [ ] if I tell somebody - I'll lose my job [ ] "*. This observation by *Edward* indicates an established issue in firms where poor culture leads to feelings of job insecurity and employees partake in knowledge hiding to wield expert power (Serenko & Bontis, 2016). This is an important consideration for HRM professionals aiming to encourage the sharing of IF outcomes as valuable knowledge for the firm.

The impact of organisational culture on employees' propensity to act on their IF based on fear of consequences was prevalent in one third of the participant interviews. Statements such as *"your immediate thought is always fear and what's gonna happen - is this gonna be successful?"* (Brad), or *"Oh don't do that - because you could get in trouble for doing the wrong thing - your job is this."* (Ronnie). *Thomas* summed this up well when he spoke about the nature of a supportive organisational culture in encouraging IF - similar to the role of trust above, *"[ ] you need to be comfortable that if you fail [ ] the consequences are right [ ] cultures that support innovation are probably cultures that also support foresight."*. *Thomas* makes a great point about how important it is for organisations to have a supportive culture that encourages the right behaviours – in terms of this study – a culture that will embrace and reward IF outcomes.

This issue is related to the risk-taking tolerance of firms as captured in *Hugh's* response when asked whether culture and leadership can change employees' willingness to use or act on their foresight:

"[culture] could be influenced through management about don't spend any money [ ] take the risk in that space [then] money's not an issue [ ] - back to the other side [ ] I think yeah - there's many ways [management] can influence [foresight] for sure. Hugh

These comments hold importance for organisations wishing to build a strong culture of IF and understanding how strategic or financial decisions can influence employee's propensity to act on their IF.

The role of autonomy and empowerment can also influence employee's actions. One third of participants made reference to how either experiencing or being denied autonomy and empowerment in their jobs influenced whether they acted on their IF. *Howard* described an historical experience in his work life where he was discouraged to have any input into how he undertook work, *"[ ] there was this foreman [ ] he was the classic micromanager [he'd say] "look, there's the front fence, park your brain there, come in, do what I tell you to do, and you can pick up your brain on the way out.""*. There are clear implications here in terms of ensuring those in supervisory roles in organisations are informed about the value of IF to work outcomes and trained in how to encourage IF behaviour from their subordinates. A positive example is provided here where *Edward's* encouraging nature as a supervisor and willingness to build autonomy and empowerment in his employees demonstrated this difference to an employee who had experienced the micromanagement described by *Howard* above: "I said, I want to empower you [ ] to make those decisions [ ] and he said "oh look the reason why I was calling you - is my last boss didn't want us to make decisions. He wanted to know everything.".

Perhaps in contrast to encouraging empowerment of employees, was the use of authority power evident in 20% of the Phase Two interviews. Although not discussed by a larger number of participants, the impact of authority power appears to be quite powerful when influencing employee IF. Quite disturbingly, *Alistair* recounted an incident where his own IF led him to resist the pressure of several senior leaders in his organisation who wanted him to act against his IF:

"The kicker with this one is I felt as though I was put under pressure [regarding a report] it was a conference call [ ] where four people were on the other end of the phone telling me what to report - and I refused. [ ] I

basically said, because of my previous sort of encounters with the xxx
through different incidents that have occurred through my career [ ] it
would be a very unwise move for any of us to report inaccurate
information - because we'll be caught - and someone will go to jail. And I
said that's not going to be me." Alistair

Alistair benefited in this situation from his own experience and confidence to defend his IF. Practices and policies designed to support IF outcomes may require HRM professionals to be aware of any authority power relationships that could negatively influence IF outcomes and behaviour. One employee who did not have the same level of confidence to stand up to authority reflected on the difficult nature of challenging authority power with your own IF, *"it's scary to give your boss advice [ ]"* (Edward).

Several participants discussed other issues related to whether or not their IF was appreciated in their workplace. These issues were identified as either *frustration experienced when foresight not appreciated, reward or acknowledgement* or *employees with foresight are troublemakers*. They are slightly different in their essence, but all related to a lack of support for IF in terms of organisational culture and practices. For example, *Byron* described a situation where he'd reported the potential for machinery to fail, but his IF was dismissed due to the financial cost to the organisation. He then explained that when the machinery did fail nine months later (with a near disaster avoided but huge financial loss experienced due to fire damage) he felt *"[ ] very vindicated that what I said was correct!"*. In contrast to this lack of support for IF outcomes, another employee described how he had been acknowledged for the IF he'd demonstrated when attending an incident in the community, *" [the organisation] make a pretty big deal of it, and you know, I got nominated for an award through that job. I do like a bit of reward and recognition myself." (Edward)*.

The issue that some employees with IF may be seen as troublemakers was mentioned by five different participants. *Bonnie* described how her workplace saw people with what she referred to as *"insight"* as troublemakers, and how she'd prefer the culture viewed their insight as a *"valuable skill"*. *Ronnie* talked about the complexity of organisations and society being *"very dualistic in thinking… right and wrong – black and white"* as opposed to his view that *"some of the best things come from people breaking rules – and having foresight*

really". There was a general sense from these employees that the organisation could foster a healthier culture to encourage employees to use their IF.

The final organisational culture emergent theme to be explored is the importance of tenure. While only three participants discussed this issue, the implications of the points they raised could be far reaching for organisations hoping to foster a supportive culture for IF. Phase One findings also revealed this issue as identified by HRM professionals in terms of the risk of losing intellectual capital if long-term employees develop IF then leave without a mentoring system in place, or the opportunity to share their knowledge to develop others. *Darren* reflected on the value of encouraging longer-term employees to pass on their knowledge when they feel they no longer want to be with the organisation: "And we've got a guy here, who's [been here for] 40 years now [ ] and I think why can't we just use this person, as a mentor? You know, with that skills and experience.". *Darren's* implied use of mentors in the organisation to capture potentially tacit personal knowledge of key employees is sensible and would be one way in which HRM professionals can consider the important sharing of IF knowledge.

Howard spoke about the value of intellectual property to the business in terms of tenure:

> *"[ ] the longer that people are here, the more capacity they have in that area [IF] - the more they understand about how the networks work, then the more capacity in the planning sense that they have [ ] ".*

Again, this salient excerpt demonstrates the value of personal knowledge and experience to organisations. It places importance on HRM practices to value, motivate and retain their talent to encourage long-term tenure and the benefits of employee' IF to their organisation.

7.3.1.1.   <u>Summary and interpretive conceptual map of organisational culture (4)</u>

Figure 7.6 represents the nature of commitment participants demonstrate when *taking action (3c)* on their IF to protect their organisation or fellow colleagues.

Figure 7.6 Interpretive analysis of superordinate theme organisational culture (4)
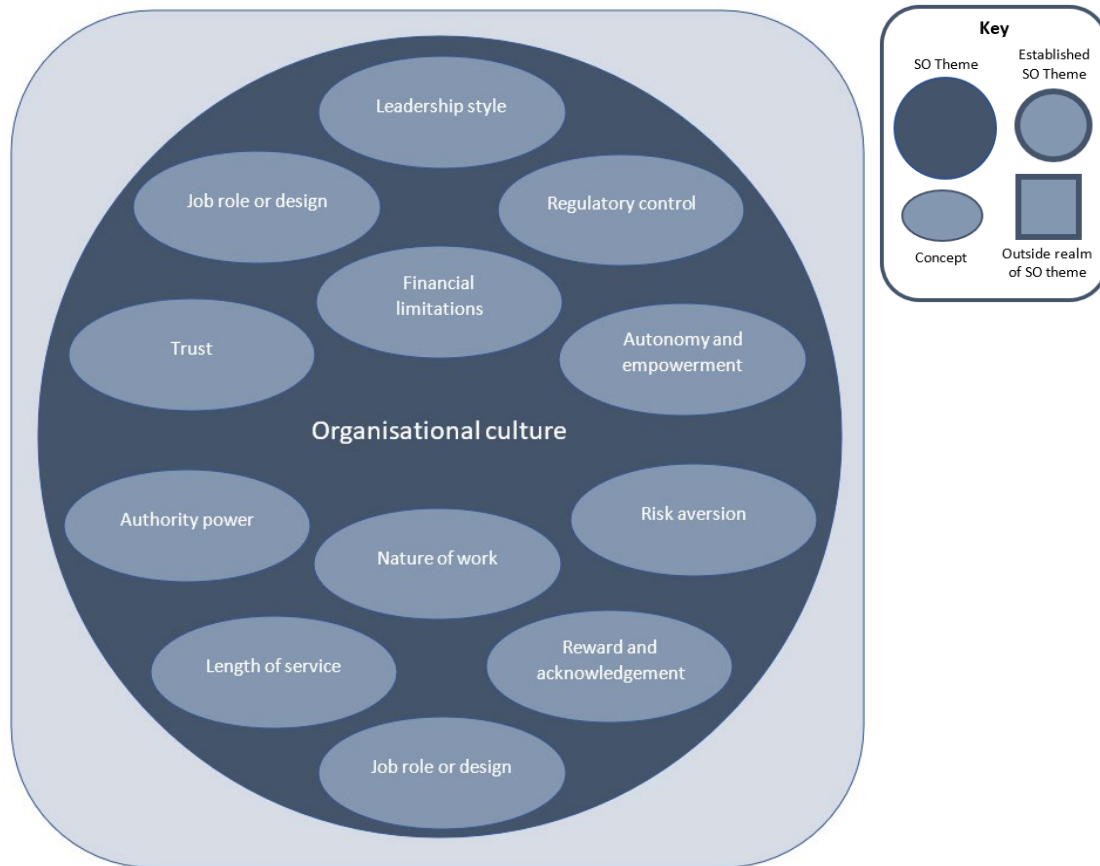
In summary, *organisational culture (4)*, as expressed through the experiences of the employees in Phase Two, has the potential to positively or negatively influence IF in organisations. Culture for IF can be influenced through leaders and their style of openness, support or empowerment, or their use of authority power to oppress IF, or the practices in place to encourage and foster IF behaviour (e.g., reward and acknowledgement), or the development strategies to encourage transfer of knowledge and learning (i.e., mentoring). Job role or design might prevent or encourage employees to use IF in their work, while the nature of people's work in terms of reporting requirements may drive the need for IF. Phase Two results have revealed many areas of interest related to organisation culture that HRM professionals can address in order to encourage, foster, and ensure that IF continues to make a positive contribution to their employees' and organisation's success. Chapter eight will now conclude the study with a discussion focused on the theoretical and methodological contributions of the IF framework.

8. Discussion and Conclusion

8.1.   Overview of the chapter

Chapter eight brings this study to a conclusion by outlining the theoretical contributions of the study, introducing a new theoretical framework for IF, and identifying a future research agenda. The purpose of this study was to shed light on the individual-level experience of foresight in organisations. The sequential methods approach first captured the existing understanding of foresight held by HRM professionals in organisations (Phase One), which informed and enhanced the interpretability (the hermeneutic circle) of the lived experience of employees with IF in organisations (Phase Two). The study's individual-level focus on the experience of IF has contributed to theory related to individual knowledge and expertise in areas of cognition, reflection, and decision-making, while also providing valuable insights regarding the role of collaborative learning and its relevance for IF knowledge creation in firms.

The chapter first examines theoretical contributions of the study aligned with the IF framework presented in Chapter Five. Initial discussion is centred around the theoretical positioning of IF in organisational literature, and the role of IF knowledge in firms. This is followed by an examination of the theoretical contribution of this study to specific individual-level IF research and a broader discussion about the theoretical contributions and implications relevant to the four elements of the IF framework: The Person, The Process, The Outcomes and The Context. This is followed by a discussion of the methodological implications of the study. The chapter concludes with a discussion about the limitations of the study, and a proposed future research agenda.

8.2. IF theoretical framework

With a focus on the unique individual experiences of employees with the phenomenon of IF, the researcher has structured the discussion around the theoretical framework of IF that emerged from the IPA of Phase Two (see Figure 8.1). As previously noted, the HRM professionals' understanding of IF in their organisations (RS-Q1) informed the interpretation of the primary focus on the lived experience of foresight. In their own right, Phase One results pertaining to HRM professional's perceptions will be discussed in the implications for HRM section (see Section 8.3) toward the end of this chapter. In answering research sub-question two (RS-Q2) *How do employees experience individual foresight in their organisation?* this study has produced a theoretical framework comprising four major elements that encapsulate the IF experience in organisations. The four elements include *The Person*, *The Process*, *The Outcomes* and *The Context* for IF.

Figure 8.1 A theoretical framework of Individual Foresight
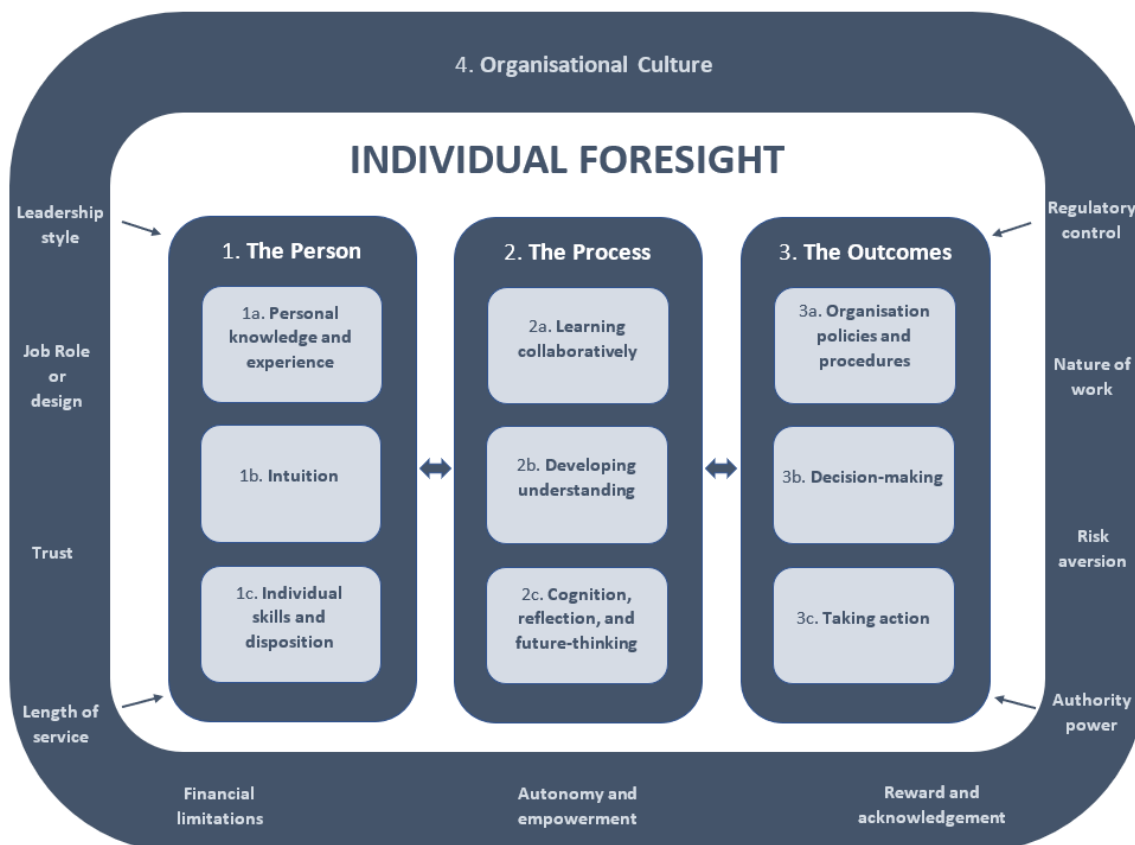
The first element, *The Person,* encompasses individual-level characteristics of IF in organisations. Derived from the Phase Two data, and supported by the literature review, several of the IF characteristics appeared in the foresight literature, while others emerged as new to the IF process. *The Person* reveals three dimensions: *Personal knowledge and experience (3a)*, *intuition (3b),* and *individual skills and disposition (3c).* Findings across these dimensions reveal several individual characteristics of IF that were evident in the foresight literature, for example, past experience (Atance & O'Neill, 2001; Schacter et al., 2017; Suddendorf, 2017; Tulving, 1985a), mental time travel (Atance & O'Neill, 2001; Cuhls, 2017; Suddendorf & Corballis, 1997), temporal preference (Conway, 2022; D'Argembeau & Van der Linden, 2004; Shipp et al., 2009) and episodic foresight (Suddendorf, 2017; Suddendorf & Corballis, 2007; Suddendorf & Moore, 2011). However, this study established several new emergent IF characteristics associated with the individual in the IF process including assessing and prioritising tasks (Claessens et al., 2007, 2010), intuition (Dane & Pratt, 2007; Hodgkinson & Sadler-Smith, 2018; Sinclair et al., 2009), and emotional intelligence (Alzoubi & Aziz, 2021; Goleman & Boyatzis, 2017; Istianingsih et al., 2020).

The second element, *The Process,* identifies three key dimensions that employees engage with during the process of IF: *learning collaboratively (2a)*, *developing understanding (2b),* and *cognition, reflection, and future-thinking (2c)*. The literature review identified several potential aspects of the process of IF, for example, Phase 2 of Voros' (2003) generic foresight process framework 'prospection' shared features of scenario planning (Curnin et al., 2022; Popper, 2008; Suddendorf, 2017; Voros, 2003) and visualisation (Atance & O'Neill, 2001; Cuhls, 2017) with study findings, while social networks (Cross, Ehrlich, Dawson, & Helferich, 2008; Tapinos & Pyper, 2018) – identified in the literature as potentially useful to IF, and future thinking (Ingvar, 1985; Sherry & Schacter, 1987; Suddendorf & Corballis, 1997; Szpunar et al., 2014; Tulving, 1985b; Wheeler et al., 1997) were also confirmed as important contributors to the IF process. New features of IF that emerged from the interviews were collaborative learning (Blanchard, Jackson, & Kleitman, 2020; Harvey, Bresman, Edmondson, & Pisano, 2022) and reflection (Donovan, Güss, & Naslund, 2015; Kneisel, 2020; Schmutz, Lei, Eppich, & Manser, 2018; Schon, 1991). In addition, experiential learning (Kayes, 2002; Shteynberg & Apfelbaum, 2013; Yardley,

Teunissen, & Dornan, 2012), social capital and intra-organisational networks (Ben Hador, 2016; Maurer, Bartsch, & Ebers, 2011; Nahapiet & Ghoshal, 1998; Nonino, 2013), and knowledge sharing (Kim & Park, 2021; Mohammed & Kamalanabhan, 2020; Yen, Tseng, & Wang, 2015) are all relevant features of the IF process and explored in the discussion to follow.

The third element, *The Outcomes,* identifies three key outcomes of IF in organisations: *Organisation policies and procedures (3a)*, *decision-making (3b)* and *taking action (3c)*. In terms of expected alignment with the literature review, the study's 'outcomes' took a different direction to (for example) the 'outputs' of Voros' (2003) foresight process model, which aligned more closely to *The Process* with its focus on tangible (workshops, reports etc.,) and intangible ("expanded perception of strategic options available") outputs. Rather, this study identified important outcomes related to new IF knowledge in the firm, such as the contribution to, or development of, organisation policies and procedures, the propensity for individuals to 'take action' on their IF, and 'decision'– as captured in the data.

The final and fourth element, *The Context*, relates to the organisational culture of organisations and how culture can determine the climate for IF. Some of the outcomes observed were expected to emerge in Phase Two given the insights from Phase One data (e.g., job role, risk-tolerance of the firm, trust, supervisory/leadership style), however, Phase Two revealed many new and important issues relevant to organisations fostering IF. For example, the level of autonomy and empowerment in jobs (Chen, Sharma, Edinger, Shapiro, & Farh, 2011; Lorinkova, Pearsall, & Sims Jr, 2013) revealed limitations or opportunities for employees to use their IF. Stressful situations at work (Faiz, Safdar, & Mubarak, 2022; Phillips-Wren & Adya, 2020) were reported as impacting how well a person was able to utilise their foresight. Psychological safety was observed as important for encouraging employee voice and actions related to IF outcomes (Chiva, Alegre, & Lapiedra, 2007; Wawersik & Palaganas, 2022; Zhu et al., 2022). The propensity for employees to act on their IF was also related to risk-tolerance of the firm (Neves & Eisenberger, 2014), and how open, trustworthy, and approachable leaders and managers were toward employees (Kim & Park, 2021; Mohammed & Kamalanabhan, 2020). There was evidence that reward and recognition played a role in encouraging foresightful behaviour. And perhaps most

prevalent from Phase Two, was that learning opportunities (as identified in *The Process* above) related to a culture of knowledge management and sharing (Kim & Park, 2021; Mohammed & Kamalanabhan, 2020). Findings from the study will be discussed further below.

8.3.   Positioning IF knowledge in firms

Situated within the RBV of the firm (Barney 1991), the KBV posits that organisational knowledge is one of the most important resources of an organisation (Grant, 1996; Haesli & Boxall, 2005; Wright et al., 2001). This study has answered the call *"to advance the understanding of organizational knowledge, the field of management and organization theory [through the] analysis of knowledge at the interaction of the individual, group and organizational levels"* (Von Krogh, Nonaka, & Rechsteiner, 2012, p. 270). The phenomenological nature of this study has revealed a deep understanding of the experience of employees engaging with IF in organisations – that is, a *micro* focus of the phenomenon of foresight. As Barney and Felin (2013, p. 141) posit when defining microfoundations, taking a *micro* perspective to the study of organisational behaviours (such as foresight) limits the focus of research on the 'personalities, abilities, and skills' of individuals only, denying an understanding of the interactional nature and context in which the behaviours occur. However, this IPA study, with its focus on the lifeworld of individuals as they experience foresight in their organisations – and informed by the perception of HRM professionals – reveals a rich tapestry of both personal and intra-organisational social capital interactions (Ben Hador, 2017) inherent in the IF process. In addition, the accounts of participants reveal valuable insights about the context in which they experience IF. As such, and aligned with the definition of microfoundations, this research contributes to the micro-level microfoundations of knowledge based dynamic capabilities (KBDC) (Barney & Felin, 2013; Zheng et al., 2011).

Insights from this study demonstrate that IF contributes to knowledge creation in organisations. Chapter Two draws attention to Nonaka's (1994) organisational knowledge creation model and the tacit nature of knowledge inherent in IF, where the researcher suggests the benefits to be gained in understanding how IF knowledge is shared with others in organisational settings. Evidence of the importance in understanding how tacit and

explicit knowledge of IF is shared in organisations was revealed in Phase Two when an employee described how he acted on his IF regarding a serious maintenance and safety issue. The history and experience of the employee to arrive at this IF outcome ('taking action') can be understood through Nonaka's (1994) modes of knowledge creation. The employee had established years of personal knowledge and experience acquired and shared (*tacit-to-tacit)* in his work area with colleagues (through mentoring and on-the job-training) – i.e., *socialisation*. Through articulating this knowledge through various forms of manuals and procedures, an explicit understanding of expected safety standards in their work area was established (*tacit-to-explicit)* i.e., *externalisation*. The employee shared their knowledge and experience regularly through both informal and formal communications and social networks resulting in a developed understanding of the situation (*explicit-to-tacit)* i.e., *internalisation*, before arriving at his final IF outcome to take action (in the form of an informal meeting) to report the situation to his executive manager *(explicit-to-explicit)* i.e., *combination.* Nonaka (1994, p. 20) describes the 'dynamic' interaction between the four modes in organisations as key to the success of knowledge creation and labels this combination of modes as the 'spiral of organisational knowledge creation'. In relation to the conceptual framework of IF emergent from this study, Nonaka's model confirms that IF in organisations is a valuable source of knowledge creation. As such, and aligned with Zheng et al.'s (2011) theoretical model of KBDCs, IF is positioned as an important contributor to the knowledge generating capability (KGC) of the firm*,* or the *"ability to develop and refine the activities and processes that facilitate creating/ generating new knowledge"* (p.1039)*.*

8.4.   Contribution to individual-level foresight research

From an individual-level perspective in organisations, this study – to the best of the researcher's knowledge – is the first study (and only IPA study) to investigate the phenomenon of everyday foresight among employees in organisations. Comparatively, one study by Tapinos and Pyper (2018) adopted a qualitative approach to understand the ways in which forward-looking analysts (FLAs) undertake foresight without the use of formalised methods (e.g., expert panels, brainstorming, Delphi technique etc.), and environmental scanning. In addition, a mixed methods study by Balaraman and Sundarraj (2017) sought to understand the individual-level foresight abilities of employees through the development of

a foresight measure. This study makes unique contributions to the literature in several ways.

Tapinos and Pyper (2018) found that analysts in a formal setting undertake five activities in the foresight process: capturing uncertainty, understanding uncertainty, foresight uncertainty outcomes and foresight impact, each of which are linked to developing a system of relationships (or mental models) about possible options for the foresight scenario. It is worth mentioning that the types of foresight problems the analysts were investigating were strategic in nature (for example – a change in Government) as opposed to related to everyday work undertaken across broad industries (as this study addressed), which meant a much more strategic and external (to the organisation) focus to foresight problems than the current study. One point of interest though in relation to this study, was that the analysts explained they relied on two factors to help build their mental models and arrive at a 'prediction' (which they label 'foresight'): 1) background and education, and 2) sources they draw on to provide information to update their mental models (in this case social networks or 'conversations with peers') (Tapinos & Pyper, 2018, p. 298). These two factors are further explained by two of the key findings of this study.

In terms of background and education, Tapinos and Pyper (2018) refer to analysts that applied their 'existing' or 'pre-existing knowledge' to understand uncertainty in their foresight process. Their study did not expand on this though, implying that analysts' pre-existing knowledge and experience relates to the process of forward looking analysis, rather than relevant work experience and knowledge related to the foresight situation in which they were partaking. In contrast, this study sought to understand how and why personal knowledge and experience of employees is both inherent and utilised in their IF process to improve outcomes for their work. Given the role of mental time travel (remembering or imagining) and episodic foresight (imagining diverse future situations to organise current actions accordingly) in contributing to IF outcomes, insights such as the preference for some employees to reflect, draw on EI, or intuition (for example) bring significantly greater understanding to how pre-existing knowledge is utilised in IF by individuals. Through these insights this study also identifies why personal knowledge and experience, certain skills,

abilities, and dispositions are all important factors to be considered in organisations when sourcing talent for different roles.

Secondly, the sources that analysts draw on to sometimes provide additional information for developing a system of relationships in their foresight process, were described as 'conversations with peers' who had more knowledge about a particular 'country…or issue' (Tapinos & Pyper, 2018, p. 298). Similar to this study, social networks appear to be an important support to individuals partaking in the foresight process. Ben Hador (2016) describes intra-organisational social capital (SC) as *"the middle level of SC in organizations…derived from interactions within and between formal and informal groups in the organization"* (p. 350). Benefits associated with intra-organisational social capital range from reduced turnover and absence to employees experiencing an environment where knowledge and intellectual capital are supported through knowledge exchange, with developmental outcomes for employees (Ben Hador, 2016). The role that social capital plays in learning in the IF process is explored below, however, in terms of the contribution to Tapinos and Pyper's (2018) work, this study revealed rich insights behind the benefits of social interactions in the IF process, such as the development of both the person experiencing IF, and the peers they involve in that process. In addition, different strategies for how individuals interact and share knowledge (e.g., storytelling, group reflection) provide valuable information for researchers and organisations seeking to understand the role of social capital in IF further.

While this study did not specifically focus on understanding the mental models involved in employees' foresight, it did reveal several skills, abilities, strategies, and processes involved in cognition in IF in the absence of formalised methods of analysis. Reflection, collaborative learning, personal problem-solving skills, intuition, and several other strategies including record-keeping, technology, visualisation, and scenarios were utilised by employees to develop understanding in work situations requiring IF. As such, this study not only expands the insights found in Tapinos and Pyper's (2018) research, but also responds to the call by Rohrbeck et al. (2015) to investigate role of individuals and groups in *cognition in action* as part of the foresight process. Rohrbeck et al. (2015) also appeal for future foresight research to investigate individual sense-making aspects of the foresight

process. As mentioned in chapter two, an important feature of sensemaking is *remembering* and *looking back* to make meaning out of reality (Weick, 2001). Whilst this study provides evidence that individuals often, through a process of reflection, draw on their past experiences to inform their current behaviour and imagining of future scenarios, further work focusing specifically on the sensemaking component of IF would be a valuable contribution moving forward.

Finally, Tapinos and Pyper's (2018) study was undertaken in a firm that specialises in 'Forward Looking Analysis' i.e., a strategic foresight organisation specialising in *futures* study. The authors identify that the single case formal setting was a limitation for their research and suggest that future qualitative research investigates individual mental models involved in IF beyond the context of an organisation specifically designed to undertake foresight work (Tapinos & Pyper, 2018). This study responds to this opportunity through its design across two organisations in two different industries, neither in the field of forward-looking or foresight analysis. As such, the activities described by participants in this study when experiencing IF represent unbiased, everyday skills that could be generalised to a broader set of workplaces and everyday work.

The second significant qualitative study on IF was undertaken by Balaraman and Sundarraj (2017). This study involved nine interviews with 'senior industry people' in their organisation to investigate how interviewees viewed three pre-existing (theoretically-based) construct dimensions for foresight: *information acquisition*, *future orientation*, and *information analysis* (Balaraman & Sundarraj, 2017, p. 986). The interviews supported the three dimensions which led to the development of a foresight measure (scale) (Balaraman & Sundarraj, 2017). Limitations of the study revealed that the foresight scale could be improved in terms of its robustness. However, there was some support for the three dimensions tested, and the researchers posited that organisations could enhance foresight capability of individuals through several suggested means related to the dimensions. This study extends Balaraman and Sundarraj's (2017, p. 992) work, by identifying several additional elements of employee foresight, as well as detailing unique individual insights about the dimensions of foresight identified. For example, in terms of *information acquisition* the senior managers explained this stemmed mostly from external and formal

sources. The researchers found, however, after administering their scale that employees at lower levels draw on informal social networks as an important source of knowledge (Balaraman & Sundarraj, 2017). They recommend that organisations need to establish the antecedents of employee knowledge-sourcing preferences in order to enhance foresight development. This study responds to this need and provides unique insights about how employees draw on informal social networks in terms of (for example) group reflection, group whiteboarding activities or approaching trusted colleagues about their unique knowledge. Additionally, and in relation to *information analysis,* Balaraman and Sundarraj's (2017) findings described that employees use structured and formal methods, often utilising technology to analyse information, but do not explain the skills useful for utilising these tools. This study has identified several unique skills and disposition required by employees to successfully navigate the IF process (including intuition, EI, confidence, self-development, passion, personal risk-taking and more), but also revealed how employees develop understanding in foresight through using various strategies (e.g., scenarios, visualisation, fishbone diagrams, record-keeping and more), in addition to technology, at both the individual and group levels.

In relation to *future orientation* (FO) Balaraman and Sundarraj (2017, p. 985) utilise dated literature to define this dimension as *"the extent of attention given to past, current and future"*. Their application of this dimension is intentionally at the strategic level (rather than individual personal level) in terms of participants' responses directed at the 'product/service life-cycle' time for foresight work being undertaken (Balaraman & Sundarraj, 2017, p. 988). In contrast, this study has detailed the advancements of 'future-thinking' in relation to IF, and prefers to consider future-thinking as *"an ability to project the self forward in time to pre-experience an event"* – as defined for episodic future-thinking by Atance and O'Neill (2001, p. 537). Importantly, this advanced definition focuses on the individual aspects of time in the IF process, returning to the value of personal knowledge and experience and its role in developing understanding in the IF process. Future studies aimed at understanding IF could adopt a definition of future-thinking that is closer to the personal traits of individuals, facilitating discussions around constructs like 'temporal focus' (Shipp et al., 2009) and 'manager construal levels' (Harvey, 2022), and their role in

influencing the processes undertaken by employees in IF. In relation to Balaraman and Sundarraj's (2017) work, the authors agree that future research that focuses on the unique 'individual orientation' of the foresight dimensions they identified, should investigate the cultural and possibly psychological aspects of employee foresight capability. The current study has made a significant contribution to achieving this end.

8.5. The Person

As identified in the IF Framework, *The Person* reveals three dimensions of IF: *Personal knowledge and experience (3a)*, *intuition (3b)*, and *individual skills and disposition (3c)*. This section will discuss related contributions specific to the individual (The Person) in the IF experience in organisations.

8.5.1. IF fosters organisational learning through experiential learning

Experience and knowledge unique to employees, and needed for IF, are crucial to organisational learning and positive outcomes for jobs and incidents. Findings from this research support that learning, as part of the process of IF in organisations, is facilitated through both personal past experience and the sharing of others' experience through mechanisms such as storytelling, mentoring, on-the-job training, or opportunities for reflection. Effective organisational learning relies on *"a dynamic process of sharing, negotiation and validation that challenges existing cognitions"* Campbell and Armstrong (2013, p. 244). As such, individual learning (and individuals' associated mental models*)* and how this learning is shared and exchanged is central to the success of organisational learning (Campbell & Armstrong, 2013). This study revealed multiple ways in which learning occurs in organisations during the IF process. Specifically related to IF, learning is dependent on knowledge, experience, and the ability for employees to mentally travel backwards and forwards in time to take actions that will impact future work outcomes. Suddendorf (1997, 2007) defined the capacity for humans to travel mentally through time as mental time travel (MTT). This study has highlighted the value of this process to organisations in terms of the benefits that learning delivers, through employees engaging with their IF, in terms of accurate decisions leading to better work outcomes. The crucial nature of personal past experience and knowledge in IF demonstrates the importance of IF to organisational

outcomes (note that further discussion will focus on the important role of collaborative learning in organisational foresight outcomes in "The Process" section).

In addition to MTT the presence of episodic foresight in the IF process highlighted other benefits related to learning and work outcomes. Episodic foresight is defined as *'the ability to imagine diverse future situations and organize current actions accordingly'* (Suddendorf, Bulley and Miloyan 2018, p.26). Atance and O'Neill's (2001) conceptual work around Episodic Future Thinking (later termed *episodic foresight*) proposed that past experience should positively impact 'prediction accuracy' through the benefits of visualisation, scenarios, and reflection. In relation to this study several participants recalled instances where they took time on the way to an incident to generate multiple scenarios in their head to predict what type of expected behaviour and outcomes might be required on their arrival. Participants confirmed the value of their past experience in how it continues to inform their current work practices.

Evidence of episodic foresight experienced in IF in organisations highlights the importance of cognition, employee experience and memory in the foresight process. As highlighted in chapter two, tacit knowledge used to generate mental models (images, hypotheses, histories etc.) of employees, and associated with sensemaking or organisational learning processes, can often threaten the potential of these processes through making valuable knowledge inaccessible (Senge, 1992). Through understanding and focusing on the individual, and the cognitive processes involved in IF, organisations could embrace practices that facilitate bringing the 'unknown' (tacit) knowledge of employees, into the 'known' - through the sharing of their personal experience and knowledge with others. As discussed, practices such as storytelling, mentoring, on-the-job training, or opportunities for reflection that cultivate in collaborative learning opportunities facilitate this crucial process.

These methods can best be defined by experiential learning theory (ELT). ELT is defined as *"the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience."* (Kolb in Kolb, Boyatzis, & Mainemelis, 2014, p. 2). The ways in which employees learn during IF manifested in activities such as personal and group reflection,

storytelling, mentoring, on-the-job experience and drawing on informal networks. Positioning these activities in Kolb's Experiential Learning Cycle enables a clearer understanding of their relevant to learning in the IF process (see Figure 8.3) (Kolb et al., 2014).

Figure 8.3 Kolb's experiential learning cycle and basic learning styles applied to IF

Concrete Experience (CE)
Employees directly experience or observe an incident in their workplace

Accommodating	Diverging
Converging	Assimilating

Active Experimentation (AE)
Employees apply learning in new ways to similar or new tasks

Reflective Observation (RO)
Employees undertake personal or group reflective practices about their experiences

Abstract Conceptualization (AC)
Employees 'assimilate or distil' reflections into abstract concepts for learning

Source: Adapted from Kolb et al. (2014, p. 3)

Concrete experience occurs in IF when employees personally experience or observe an incident in their workplace. Many employees then engage in a reflective process – as described by participants, which can be an individual reflection or take place in a group. These reflections, through a process of cognition, are 'assimilated and distilled' into abstract concepts (abstract conceptualisation) – where employees consider what they have 'learned' from their experience, and possible new ways to approach a similar situation next time. When employees are faced with similar situations, they draw on their experience and understanding about that situation to respond appropriately (active experimentation). Importantly, and as observed in the study findings, employees learn in different ways and

may choose observation over action, or vice versa; or they may find that learning works best for them when taking time to think reflectively, or seek out new information, as opposed to others who prefer to approach the task head on (Kolb et al., 2014). Kolb et al. (2014) define these differences in learning preferences as 'learning styles': Diverging, assimilating, converging and accommodation (see Figure 8.3). Without detailing these learning style preferences here, it can be observed from the data that employees' learning styles were reflected in the ways they seek out opportunities to learn (developing self), or perhaps the nature of their work demanded (i.e., highly regulated reporting requirements requiring reflection and future-thinking), or how they were presented with opportunities and mentoring moments (on the-job-training and storytelling) through various incidents or circumstances that arose in their everyday work. Collaborative learning was a surprising new feature of the IF process to emerge from the Phase Two data. Positioning the many strategies in which collaborative learning manifested in the IF process in Kolb's experiential learning theory, enables focused strategies for fostering foresight learning in organisations.

Inherent in the process of experiential learning is reflection. Whilst the value of reflection continues to be disputed depending under which approach it is considered (Jordi, 2011), this study has shown the value and learning that occurs through reflective practices as part of the IF process. Reflection is identified as an important contribution to 'The Process' dimension of IF and is addressed in the 'The Process' section below. Another inherent requirement for IF and MTT (and thus for the process of reflection and effectiveness of experiential learning in organisations) is that these two processes rely on effective, healthy memory systems (Suddendorf et al., 2009; Tulving, 1985b; Wheeler et al., 1997).

Personal past experience and knowledge play a vital role in the foresight process. Although the melding of neuroscience and foresight in the literature has been scarce, recently researchers have advocated for the value of neuroscience to the discipline of *Futures Studies* (FS) - pointing out the importance of memory systems necessary for futurists to develop mental schemas related to organisational futures and scenario planning (Conway, 2022; Rhemann, 2019). This study confirmed that employees draw on memory systems to access their personal past experience for a number of activities including

visioning, the development of forward-looking scenarios (imagining), remembering lessons learned, recalling, and sharing personal experiences that contribute to their own and others' development, and more. The nature of foresight work in neuroscience is primarily of a positivist nature (involves experiments and objective measures) which requires the necessary exploratory work involved in qualitative research in general, and this study in particular. Neuroscience offers an opportunity for outcomes related to research such as this study to be tested and generalised through experimental designs.

Given the many insights this research has provided into how employees value and use their past personal experience, there is greater scope for inter-disciplinary research to investigate ways in which IF is important to organisational outcomes. For example, the aging workforce is a critical issue facing organisations worldwide. As Chapter Two acknowledged, metamemory research confirms that age is one of the challenges that exists for individuals and their foresight capacity (Lyons et al., 2014; Steinberg et al., 2009). Rhemann (2019) also discusses the vulnerability of humans' foresight ability in terms of memories being able to be 'overwritten'. However, whilst the impact of potential memory loss or failure through ageing or other means holds obvious implications for workplaces – this study demonstrated the many benefits to organisations of fostering IF through collaborative learning to facilitate the sharing of foresight between more experienced members of the organisation and its newer members. This issue will be revisited in "The Process" discussion below.

8.5.2. Employee skills and disposition influence IF experience

The ability to assess a situation and prioritise tasks to respond appropriately is key to the IF process. Findings from the study highlighted that participants' responses differed in terms of their *strategies* and *timing* or 'time taken' to assess and prioritise tasks within the process of IF. As discussed in Chapter Two, Slaughter (1995, p. 48) argued that foresight was a part of 'the rich world of understanding and perception made possible by the human brain/mind systems' and involved four core activities, of which the first two are of most relevance to this study. (Note: The latter two activities relate to the work undertaken by futurists for long-term strategic foresight):

1. ***Assessing*** *the implication of present actions, decisions, etc. (consequent assessment)*
2. ***Detecting*** *and avoiding problems before they occur (early warning and guidance)*
3. ***Considering the present implications*** *of possible future events (pro-active strategy formulation)*
4. ***Envisioning*** *aspects of desired futures (normative scenarios)*

Slaughter (1995) pinpointed the cognitive nature of IF activity; however, his theory of strategic foresight is described in terms of futures work involving formalised tools used to generate longer-term strategic foresight outcomes (e.g., environmental scanning, scenario analysis etc.). This research sought to explore the individual nature of differences in cognition involved in IF, and the findings have provided support and detail for elements of Slaughter's explanation of the foresight process. For example, this study confirmed that employees undertake cognition involved in IF in unique ways. Their idiosyncratic strategies appear to contribute to their IF experience in equally rich ways yet highlight the differences in how they 'assess' implications or 'detect' problems (as described above). The exploration of employees' experience of IF in organisations has highlighted the heterogenous approach needed to explore cognitive skills required by employees to partake in IF. One important aspect of cognitive skills raised by participants when discussing their IF experience, was emotional intelligence.

A heightened awareness of emotional intelligence or reported personal awareness and self-management of employee emotions, seemed to positively impact employees' foresight experience. Whilst literature associated with emotional intelligence and foresight specifically was difficult to ascertain, recent research that summarised the ways in which emotions impact cognitions in workplaces showed that negative affect drives focus and attention to detail for information processing, while positive affect conveys a safe environment for exploration and creativity (Elfenbein, 2023). Future research will need to investigate the role of emotions and EI in the IF process. While some respondents utilised EI to gain control of their emotions in preparation for an upcoming difficult scenario requiring foresight, others identified that stressful situations sometimes overrode their ability to use their IF. Another interesting role of EI as observed, was when it is needed to successfully

convey IF outcomes to others. The contribution of an employees' IF to the organisation could be influenced by the employee's own EI, and perhaps inability to communicate their IF effectively. Ansari and Malik (2017) determined that EI positively and significantly influenced knowledge sharing in organisations, however, called for future research to capture the nature of emotional intelligence in knowledge sharing situations. As discussed, opportunities exist for further research into the impact and influence of emotional intelligence in undertaking IF, but also acting on IF. This study has however shed some light on specific and unique individual experiences where EI appears to have influenced employees' IF performance (remaining calm to assess a situation and generate scenarios) or action (acting on IF when empathy and concern for others drives one to do so). When considering operational implications of these findings, it will be important for workplaces to understand the impact of emotions and account for this in how work is designed, how employees are supported, or in the selection of employees with the appropriate skills and disposition to self-manage their emotions when needed.

Similar opportunities exist when considering the role of self-confidence in IF. This research revealed that self-confidence plays a diverse role in IF. It can be an enabler, in terms of employees *having* the self- confidence to act on their IF; or it can be an enabler in terms of employees seeking feedback during the IF process or exhibiting IF outcomes and being encouraged to develop these skills. Given the influence of self-efficacy and managerial openness on the tendency for employees to voice their ideas (Prince & Rao, 2022), developing a culture that builds and fosters self-confidence as part of the IF experience in organisations would benefit organisational outcomes. In addition, lack of self-confidence was shown to manifest in participants' risk-averse nature in terms of speaking up about their IF. The benefits of establishing a risk-taking tolerance at the organisational level, as well as addressing strategies to engender self-efficacy as part of the IF process, are discussed further in "The Context" below. However, it is worth noting that developmental opportunities in the IF process have been shown to build self-confidence through developing the IF of others (likely through increased knowledge and experience in their work). Further research could investigate both the influence of IF on employee self-confidence, but also the influence of self-confidence in the IF or for IF outcomes. Similar to

EI, and as demonstrated in the *taking action* example regarding the employee who spoke up about a major safety incident, lack of self-confidence or the ability to convey IF insights to those in positions of authority in organisations, could have detrimental effects for organisational outcomes regarding safety and missed opportunities.

One of the intriguing insights from this study was the diminishing attitude and engagement with IF of longer-term employees. Recent literature examining the impact of work climate drivers (e.g., pay, empowerment, leadership etc.,) on constructs such as motivation, satisfaction and loyalty of employees confirmed that longer-tenure employees regarded work conditions, image, and empowerment as more important than drivers such as pay and leadership (Lamberti, Aluja Banet, & Rialp Criado, 2022). Similar findings were captured by Brimeyer, Perrucci, and Wadsworth (2010) who found that higher levels of autonomy positively affected worker commitment of longer-term or more experienced employees. Given the importance of IF to improved decision and work outcomes, HRM strategies will need to enact strategies that engage longer-tenure employees through empowerment (e.g., flexible mentoring arrangements to share their knowledge) and attractive work conditions. Strategies like this will aim to target the attitudes of employees in valuing the importance of IF to their work. One other minor finding from this study supports the need to ensure positive attitudes toward valuing IF. Opportunities for employees to engage in self-development that raises awareness and education about the benefits of engaging with IF would be a valuable consideration for HRM practitioners seeking to foster foresight in their organisations. These issues will be summarised in "Implications for HRM" later in the chapter.

8.5.3. The value of intuition to IF, and IF to Situational Awareness

Intuition plays a key role in decision-making in organisations and appears to be significantly involved in the IF process. This study provides support for research that shows that domain experience (experience in a field of expertise) is important to the effective role of intuition in decision-making (Dane et al., 2012). In examining the experience of IF, employees often referred to moments of 'knowing' that they would then associate with a 'gut feeling' that contributed to their decision-making and influenced whether or not they

acted on their IF. In terms of positioning intuition within the experience of IF in organisations, Sinclair et al. (2009) provide a useful definition that captures the dual-nature of intuitive experiences described by participants and might explain the differences observed in the temporal nature of IF decisions (i.e., some decision made within seconds, others over several days). That is, researchers in the field of intuition argue there are two systems associated with the intuitive process: System 1 is intuitive, effortless, rapid, implicit, tacit; while System 2 is reflective, effortful, controlled, slow, relying on explicit knowledge (Kahnemann and Frederick 2002; Sinclair et al. 2009). The authors posit that the process of intuition is *"a rapid non-sequential information processing mode, which involves cognition and affect…[which] occurs without deliberative rational thought, while frequently accompanied by a feeling of certitude"* (Sinclair et al., 2009, p. 401). Further, Sinclair et al. (2009) argue that strategic decision-making, depending on the cognitive skill of the decision-maker, could involve a choice about which system to utilise – depending on the situation. This seems particularly relevant to the nature of IF decisions and the process of developing understanding in a situation of IF – which appears to call on both systems depending on the nature and context of the situation experienced. Further, the informed nature of intuitive decision-making explains the frustration of participants in it being undervalued by organisations. Perhaps if organisations understood the value, and informed nature of intuitive decisions – particularly in IF regarding their association to a decision-maker's past personal experience and knowledge – organisations might invest more in the awareness and education of employees in the appropriate use of intuitive decision-making. This point is relevant to another insight about intuition and how it might be useful in the process of IF and organisational learning.

Sadler-Smith (2008) argues that the tacit nature of expert knowledge involved in intuitive decision-making can be accessed through various collective learning strategies. He proposes that coaching, apprenticeships, and mentoring provide valuable ways to share tacit knowledge – which aligns with observations made in this study, and recommendations featured in 'The Process' discussion section next (Sadler-Smith, 2008).

Another important outcomes of this study related to intuition is that intuition reportedly influenced the propensity for some employees to act on their IF. Physical feelings

associated with intuition tended to encourage more cautious or foresightful approaches to work. This was evident when employees chose to make intuitive decisions above and beyond the guiding expectations of policy – resulting in safer outcomes. This point highlights the important role of intuition in IF situations of safety for organisations. Using the Hudson River case study in which an A320 was landed on the river following a bird strike, Okoli (2021) argues that organisations should invest in training for employees to become better intuitive thinkers – given the benefits of intuition as a decision-making option in moments involving "time-pressured crisis situations" (p. 18). This study supports this view, and also acknowledges the role that personal risk, and the nature of the decision (how high the stakes are) play when an employee experiences intuition as part of the IF process.

With regards to intuition and its prevalence in the IF experience the results are arguably useful when considering the model of *Situational Awareness* (SA)*.* Endsley and Garland (2000a) define SA as "knowing what is going on around you" (p. 5) and position this definition in terms of operators engaged in a task involving relevant goals and "decision tasks" for their work. In terms of this study, employees recognise intuitive feelings as part of their IF experience, and how intuition can prompt further action (e.g., further reflection or 'time taken' to consider a decision or action) or simply a decision to follow their intuition instead of formal procedure. These observations reminded the researcher of the 'Projection of Future Status' ("the ability to forecast future situation events and dynamics") element in Level 3 SA of Endsley's SA model. Endsley herself has acknowledged that further research around the construct of projection is needed (Endsley & Garland, 2000b). However, she also claims that in every field she has studied SA, the "experienced operators rely heavily on future projections" and "it [projection] is the mark of a skilled expert" (Endsley & Garland, 2000a, p. 7).

Through her commentary about Projection being common among skilled operators, Endsley infers the importance of experience to SA ability, a similar observation to experience and IF, or experience and intuition, in this study. When examining Endsley's SA model further, four of the key inputs into Level 3 SA "Projection of future status" arguably reflect several insights gained from this research: 'experience' (Personal knowledge and experience), 'long term memory stores' (for this study, related to episodic and semantic

memory), 'automaticity' (reflected in this study by the role of autonoetic consciousness and intuition) and 'information processing mechanisms' (Cognition, reflection, future-thinking). While the work undertaken in the development of Endsley and Garland's SA model is extensive, technical, and involves many more components in comparison to this qualitative study, insights regarding individual differences of operators' SA might be explained through considering the outcomes of this research. Further, organisations seeking to develop the skill of projection in their operators may find value in the suggested HRM strategies and approaches for developing IF. The discussion continues now in terms of considering "The Process" component of the IF model.

8.6.   The Process

Understanding the process individuals undertake in foresight has eluded many strategic foresight researchers (Horton, 1999; Portaleoni et al., 2013), as Chapter Two confirmed. There have been minimal qualitative studies undertaken, until now, to consider how individuals, in the absence of formalised strategic foresight methods (i.e., scenario planning, forecasting, Delphic technique and more), undertake the cognitive work involved in foresight. Whilst this study has not been able to measure the cognitive and neuropsychological domains and methodologies (e.g., EEG and MRI) of how individuals cognate during foresight, it does offer valuable insights into how individuals experience and undertake the process of IF in organisations using non-formal foresight methods and processes. In addition, and as discussed, this research contributes to understanding the individual skills and disposition required in the IF process. These insights offer future direction for researchers (see Section 8.10) and provide practical guidance for HRM practitioners seeking to harness and foster foresight in their organisations (see Section 8.9). The discussion below regarding The Process centres around key unique insights and contributions to the process of foresight. The section focuses on four key dimensions of the IF process: collaborative learning, cognition, reflection, and future-thinking.

8.6.1. Collaborative learning in IF

Inherent in knowledge creation in organisations are the social interactions of organisational members. This study revealed that collaborative learning, through informal

social networks and formal reflective group mechanisms, facilitates the creation and sharing of knowledge unique to the foresight experience. This knowledge is valuable to organisations as 'outcomes' of the IF process. This finding responds to, and extends, the conceptual argument by Helfat and Peteraf (2015) that the cognitive capability of firms lies in the capacity of managers to undertake mental activities such as attention, perception, problem-solving and reasoning. Whilst Helfat and Peteraf (2015) position these capabilities at top level executives in organisations, this study is unique as it has shown that valuable cognitive capabilities that contribute to knowledge creation are also found at the individual or 'micro' level in lower and middle-management levels of the firm, through a process of IF.

Acknowledging the role of social capital in knowledge sharing in IF is important. As discussed previously, this study has shown that IF and knowledge sharing in the IF process generates new knowledge observable at the individual, group and organisations levels – which is essential in contributing to the microfoundations of KBDC of the organisation (Von Krogh et al., 2012; Zheng et al., 2011). Trustworthiness, as confirmed by participants, has been shown to affect social capital in firms (Tsai & Ghoshal, 1998). In addition, perceived trust of colleagues has been shown to be positively affected by knowledge sharing behaviour and organisational learning (Kim & Park, 2021). The IF process, featuring collaborative learning and social interactions that contribute to understanding in IF, as well as individual and group reflection processes that facilitate knowledge sharing and creation in IF, confirms the benefits of knowledge sharing in fostering organisational learning, but makes a unique contribution in that IF itself facilitates collaborative learning in organisations.

The phenomenological nature of this study means participants were able to share their unique insights into the value of collaborative learning to development in their organisations. When discussing the ways in which some of the employees engage in the IF process, many participants referred to the developmental outcomes of fellow colleagues in work teams or informal networks. Likewise, the findings indicated that individuals draw on their informal social networks and 'trusted' colleagues for input into their IF process. Collaborative learning in organisations is a well-researched and established aspect of organisational behaviour (Harvey et al., 2022; Kneisel, 2020). In terms of this study, group

reflection, opportunities to share IF for team development, the propensity for participants to share their IF insights with trusted colleagues in a process of self-reflection or self-development, and moments of shared learning or knowledge, highlight the significance of intra-organisational social networks and social capital to the IF process. Trust and social capital have been well-established as relational and crucial aspects to organisational learning. Insights from participants regarding a sense of a 'lack of trust' from senior managers, or who demonstrated a 'fear of consequences' in voicing their IF insights, also referred to the lack of support for risk-taking in their organisations. These experiences provide valuable insights into the employee experience of IF, and how behaviours can reflect the cultural environment in which employees operate. It will be the responsibility of HRM professionals to establish a safe risk-taking culture to foster IF in their organisations, as discussed in Section 8.9.

Group reflection comes in multiple forms and is undertaken in both informal and formal ways. Group reflection in this study was classified as "a process of team-based reflection in the work environment which could contribute to the development of team foresight or capturing team foresight". Often 'teams' comprised the direct reports of supervisors taking part in the study – with the term 'teams' adopted for this definition because this is how the participants in their lifeworld referred to the employees they worked with. The researcher adopted the term 'group' reflection when coding this data as this study did not seek to clarify information around group composition, processes or outputs as one might if focusing on a group versus team classification (Kozlowski, 2018).

Recent research by Kneisel (2020) highlights the value of process to group reflection. Importantly, the generation of quality team mental models "which represent[s] collective knowledge structures and common mental representations of team members" (Konradt, Chippers, Garbers and Steenfatt in Kneisel, 2020, p. 144) were shown to mediate the effect of team reflections on team performance, while recurring team reflection was associated with better team mental model quality. This research emphasises the importance of encouraging quality practices for group reflection in the IF process. The shared experiences of participants in this study support Kniesel's (2020) findings that recurring and well-structured group reflection opportunities result in better group outcomes. A crucial aspect

of group reflection is when groups are operating in high-stress, intense situations but require reflection to generate group or team foresight for a better outcome. Often reflection is considered a process undertaken post-incident in a period of calm or downtime, however, Schmutz et al. (2018) have investigated the role of reflection during peak team performance events. Referring to group reflection as 'team reflexivity' (TR) the authors found that in-action TR increases in non-routine tasks Schmutz et al. (2018). Findings from this research demonstrate support for in-action TR as described by Schmutz et al. (2018). In addition, Schmutz et al. (2018) call for research to investigate *who* is reflecting in TR to further understand individual-level contribution. This study has demonstrated that individuals utilising IF take action to instigate reflective practice during incidents in organisations. It extends TR research in providing unique insights into the background experience, knowledge, skills, and disposition of individuals who partake in instigate or facilitate TR during workplace incidents. In addition, it answers the call by the researchers to investigate TR beyond the context of medical teams' clinical performance.

Another distinction made in this study was the use of more direct approaches such as role modelling or storytelling for developing foresight in teams or capturing new foresight outcomes from collaborative work opportunities. Role modelling and storytelling are important to improve IF in organisations. Storytelling is a form of vicarious learning in organisations (Myers, 2021, 2022) and explains the behaviour and experiences of participants in this study when sharing their knowledge to enhance the knowledge and experience of others. Given the established reliance of IF on past experience and knowledge employees new to an industry or with shorter tenure with an organisation are seemingly disadvantaged in terms of IF ability. Pertinent to the insights this research has provided, storytelling or mentoring is a positive way in which less experienced employees can enhance their knowledge and experience, and ultimately their IF. In terms of role modelling, transformational leadership has been shown to have a positive influence on team reflexivity as a result of enhanced shared vision (Schippers, Den Hartog, Koopman, & Van Knippenberg, 2008). The relevance of leadership and culture to IF will be discussed in "The Context" section below. Future research may like to consider more directly, the role of

transformational leadership and mechanisms like storytelling and mentoring in fostering IF in organisations.

8.6.2. Cognition in IF

This section focuses on the elements of cognition that have not yet been addressed in the discussion and that demonstrate the implications and contributions of this study. Ways in which participants cognate during their experience of IF reflected the idiosyncratic nature of this study. Operating in their own lifeworlds and drawing on informal foresight measures resulted in a colourful array of strategies to cognate and understand information in the IF process. Several key observations can be made based on participant experiences of cognition in IF in organisations. The first is the variety and relatively unique ways in which individuals cognate to arrive at an IF outcome such as a decision, taking action or policy contribution. Secondly, understanding cognition in IF should not be undervalued in terms of the benefits of accessing tacit knowledge that can be pertinent to IF outcomes in organisations. This point was made previously when considering the dependency on experience and knowledge in the IF process, and the challenges of bringing tacit knowledge into the open so that mental models associated with an individual's foresight can contribute to changing mental models necessary for organisational change (Senge, 1992; Tapinos & Pyper, 2018). Finally, rare and unique insights associated with IF cognition have also been associated with establishing foresight competence (Major et al., 2001). Thus, in maintaining a strategy of developing competencies and capabilities for such activities as 'sensing' (or indeed IF) in organisations (Teece, Peteraf, & Leih, 2016), it is necessary for organisations to build KBGC through opportunities of organisational learning (Helfat & Peteraf, 2015). Organisations will need to continue to pursue greater understanding of employee cognitive processes involved in IF to build this capacity. This study has made a valuable contribution to this pursuit.

Observations of employee cognitive processes during IF in organisations were diverse and provide unique insights for foresight research. In addition, cognitive practices tended to draw on or impact other superordinate themes such as personal knowledge and experience, and reflection. Although this study has revealed some insights regarding how employees

transfer tacit IF knowledge into shared knowledge useful for individual, group and organisational level learning outcomes, understanding the mental models of individual's engaging in IF could be the focus of future research. This study has answered the call for greater insight and clarification around cognitive processes included in foresight definitions. For example, Rohrbeck et al. (2015) recently proposed a new definition of corporate foresight (as per Chapter Two discussion) which included some elements of the 'individual'. He claimed that "Corporate Foresight is identifying, observing, and interpreting factors that induce change [and] involves multiple stakeholders…" (Rohrbeck et al., 2015, p. 2). This study sheds light on Rohrbeck's (2015) definition by seeking understanding, at the individual and group levels, of how stakeholders contribute to the foresight process. For example, how individuals assess and prioritise situations of IF; and how employees draw on past experience and knowledge, intuition, and collaborative learning opportunities and to interpret the 'factors' relevant to the IF situation.

Regarding Voros' (2003) foresight process model included in the conceptual framework for the study (see Figure 2.3 in Section 2.5) and discussed in Chapter Two, this study provides insight in terms of unique employee experiences undertaken during the foresight processes of 'analysis'. For example, while Voros (2003) defines the inputs of the foresight process as a separate 'phase' of foresight, this study demonstrates that inputs derive from knowledge and experience of the employee, as well as social interactions and cognitions experienced as part of the foresight process itself. This implies that the IF dimensions form part of an integrated and interrelated process of IF to arrive at IF outcomes. In terms of the 'analysis, interpretation, and prospection' phase of Voros' (2003) model, which he terms 'foresight', this study has shown that non-formalised methods of foresight are utilised at the individual-level of foresight, with intra-organisational networking contributing to this process, along with the cognitions, future thinking, and reflection (discussed further below). Unique contributions to the foresight process that this study has revealed include (but are not limited to) the way in which employees draw on social networks and collaborate to fill gaps in their own knowledge – which also responds to Horton's (1999) concern that managers do not always know how to interpret new knowledge, and therefore require a third party for input; or the way employees reflect and

'remember' – drawing on personal past experience which contributes to their future-thinking outcomes. This may prompt futurist researchers to consider the value of a foresight analysts' personal past experience and knowledge regarding the organisations they engage with for strategic foresight strategies. More work can be undertaken to examine these processes and issues further, however, this research has provided unique qualitative insights into how employees cognate during the foresight process.

8.6.3. Reflection in IF

The value of reflection in the IF process has been highlighted in terms of its association with many of the superordinate themes explored previously. In collaborative learning, reflection facilitates group reflective processes and results in group and individual learning – as discussed above. For both groups and individuals, reflection appears to be a vital contributor to their development of understanding in the IF process – leading to the final IF decision or action taken. The analysis (Chapter 7) detailed this process, and Schon's (1991) work on reflexivity, particularly *reflection-in-action* and *knowledge-in action* align well with the experiences and actions of participants. Schon (1991) describes the process whereby individuals question their actions (or 'knowing') while experiencing an event as *reflection-in-action*. In line with Schon's (1991) theory team members may normally undertake everyday tasks that are predictable and repetitive, or 'intuitive and spontaneous' (p. 56) without the desire or need to 'reflect' on their 'knowing' how they undertake these tasks. However, when intuitive tasks result in unexpected outcomes (good or bad) employees are more likely to partake in *reflecting-in-action*, as aligned with outcomes of Schmutz et al. (2018) outline previously. However, IF also involves *reflection-on-action* and this finding from the study was also deemed important in terms of organisational success.

Findings indicated that many employees prefer to take time after an event (i.e., partaking in *reflection-on-action*) to consider lessons learned, or reflect with their group about what could be done differently next time. An important observation related to "The Outcomes" section below, is when employees reflect 'in-action' or 'on-action' and then translate this reflection into knowledge i.e., a new checklist or a procedure or policy for the organisation. Schon (1991) refers to the conversion of knowledge gained through *knowing-*

in-action as "knowledge-in-action", of which he suggests represents theory that is 'deliberate, idiosyncratic constructions [that] can be put to the experimental test' (p. 59). Although Schon's definition was presented in the content of researcher theory – much the same can be said about organisational policies and procedures produced from employees operating in organisational settings. These important outcomes from reflection are also an indication of the role of reflection in organisational learning.

Perhaps the most significant contribution of the study in relation to reflection, is the profound relationship that reflection seemed to have across a broad number of emergent and superordinate themes in IF in organisations. Reflection was central to many of the IF dimensions. For example, reflection is not possible (as established through neuroscience research) without personal knowledge and experience. Reflection is related to the skills and disposition of individuals (e.g., as part of the EI process in preparing for an event, or for employees to draw on past experience in seeking self-development). Reflection featured in team development and learning (group reflection activities), in sharing knowledge (storytelling requires reflection on past experiences and lessons learned), in personal problem-solving (taking time), and in future-thinking and efforts to 'see the bigger picture'. A review of literature related to these insights (for example the role of reflection in visualisation in organisations) reveals a paucity of research in this area. However, the role of visualisation has previously been explored as valuable to decision-making, as highlighted in Klein's (1997b) recognition primed decision (RPD) model. Klein (1997b) argues that there are two functions related to RPD; the first requires an individual to identify relevant experience to the situation; the second requires mental simulation (in the case of IF – visualisation) where the individual imagines possible courses of action and their consequences. This means visualisation in IF could be explained by the RPD model of decision-making. Storytelling and reflection, however, feature in education and health disciplines, but again, reflection has been well-established as a valued practice in organisational learning. In fact, on researching the significance of reflection to understand the findings in relation to IF, the research has shed light on this study's outcomes in terms of the need to define the 'form' and 'level' of reflection involved in the IF process (Høyrup, 2004).

Høyrup (2004) defines two types of reflection. A more individual-focused 'reflection' commonly considered as part of Schon's (1991) reflective practitioner work and related to the *"mental activity aimed at investigating one's own action in a certain situation and involving a review of the experience, an analysis of causes and effects, and the drawing of conclusions concerning future action"* (Woerkom in Høyrup 2004, p. 444). This type of reflection has been utilised as part of this discussion. However, 'critically reflective work behaviour' has been defined as *"a set of connected activities carried out individually or in interaction with others, aimed at optimising individual or collective practices, or critically analysing and trying to change organisational or individual values"*. This type of reflective practice was observed in the more formalised group reflective processes reported in this study. A useful contribution from the literature would be for organisations to draw on additional aspects of critically reflective work behaviour identified by van Woerkom and Croon (2008) such as seeking feedback, experimentation (learning by doing), critical opinion-sharing (asking 'why' questions), challenging groupthink (purposeful behaviour of challenging group decision-making), and career awareness (using learning to create one's identity). These strategies could be adopted by organisations as part of a strategic approach to fostering IF, information sharing, and organisational learning.

8.6.4. Future-thinking in IF

In terms of 'future-thinking' this research has demonstrated that IF is not as simple as simply 'thinking ahead' about one's work. The future-thinking aspect of the IF process points to some intriguing insights about *how* and *why* individuals MTT or 'imagine' future outcomes as part of the IF experience. Some employees operate in a highly regulated environment where reporting requirements create pressure for them to record and meet regulatory expectations as part of their daily work. As a result, they remained focused on these future expectations as they undertake their work. This observation about job roles, regulatory requirements and certain employees requiring the skill to future-think in order to fulfil the requirements of their job, hold potential implications for HRM practitioners in terms of recruiting and placing candidates with skills to 'think about the future' in appropriate roles in the organisations.

Certain employee skills related to future-thinking may be valuable in potential candidates. Understanding and observing how employees think about the future in relation to planning future job requirements or 'activities to be performed in the future' is referred to as prospection (Kliegel et al., 2000). This study demonstrates that prospection is a useful employee skill that should be utilised in organisations to ensure that future actions or expectations of employee work are not overlooked. Depending on the job role, this could be a crucially important aspect of employee ability, for example, Kliegel et al. (2000) referred to the role of air traffic controllers needing to return to future actions as a result of managing regular delays to their work in a given time period. This study confirmed that some employees need to constantly consider the future outcomes of their work due to the long-term impacts and regulatory implications of poor work outcomes.

One of the other key observations about future-thinking was the difference in temporality that employees experienced when future-thinking. The exploratory nature of this study revealed that employees experience future-thinking under different conditions and have a propensity to undertake future-thinking in different ways. For example, some employees demonstrated how they think about the outcomes of their decision in a matter of seconds (e.g., in a meeting when considering how the information they deliver will be received), while other employees describe a much longer process of consideration (influenced by their concern for people or the business) before acting on their foresight. Sensemaking research may help explain this temporal phenomenon.

Recent sensemaking literature provides a starting point for research exploring time taken for future-thinking. Sandberg and Tsoukas (2020) propose a typology of sensemaking that captures the idiosyncratic nature of sensemaking in organisations. Their model also defines several different temporal conditions for sensemaking. As such, they posit that "immanent" sensemaking is characterised by routine daily tasks requiring relatively "immediate-anticipatory" actions (Sandberg & Tsoukas, 2020). This means employees respond immediately to a situation (as in our meeting example) but also in an anticipatory manner (similar to fast future-thinking) where they have to "make anticipatory sense of how the present situation will unfold" (Sandberg & Tsoukas, 2020, p. 10; see also discussion on 'intuitive judgement' related to domain expertise, Dörfler and Ackermann 2012). Although

four sensemaking types are presented, we will only detail one other here in order to demonstrate the contrast between the types and reflect on how they might explain the temporal differences in future-thinking in IF.

The second type of sensemaking relevant to this study is called "detached-deliberate" sensemaking (Sandberg & Tsoukas, 2020). This type of sensemaking occurs when "problematized" decisions are required by the employee (i.e., out of the ordinary for their daily activities), and they can therefore focus on the "distinct experience" relevant to the problem requiring both "retrospective-prospective" dimensions (i.e., recalling relevant past knowledge and experience and thinking about future actions required) (Sandberg & Tsoukas, 2020, pp. 13-14, see an alternative discussion for 'intuitive insight' in Dörfler and Ackermann 2012). Positioning Sandberg et al.'s sensemaking typology in the context of IF provides a framework to consider the temporal nature of future-thinking in IF. It also brings focus to the sensemaking process and highlights the potential for sensemaking to contribute to the IF process. For example, sensemaking could be considered one way of 'developing understanding' in the IF process. However, sensemaking appears to be a complex and expert analysis tool which may prevent or limit its use for many organisations seeking attainable ways to foster and develop foresight in their organisation.

Organisations, through leadership and culture, can encourage employees to think about the future when performing their job roles. Findings from this study suggest that employees are more likely to consider the impact of their current actions and decisions relating to organisational change if they are made aware of the implications. If employees are able to take responsibility and actions that are considerate of the future consequences of those actions, as this study has demonstrated, the outcomes of their decisions and actions will be more beneficial for their work and organisation. Excitingly, new research proposes a *Futures Consciousness* (FC) scale, and despite its intention to be specifically utilised for futures work, its development and alignment with both personality and social psychology fields means it could be suitable for use in everyday organisations seeking to establish the future-thinking propensity of their employees (Ahvenharju et al., 2021). The authors suggest the FC Scale may explain differences in the outcome of futures thinking between individuals, and also consider how different individuals' future-thinking can be

influenced by contextual factors. For this study, the FC scale promises exciting alignment between certain elements of IF and the dimensions measured (Ahvenharju et al., 2021). A comparison of FC dimensions and IF superordinate themes is shown in Table 8.1. Considered a reliable tool (Lalot, Ahvenharju, & Minkkinen, 2021) the FC Scale may be useful for organisations in identifying IF and building foresight competence through their employees. The following section of the discussion addresses "The outcomes" component of the IF model.

Table 8.1 Comparison of Futures Consciousness (FC) dimensions and IF superordinate themes

FC Scale Dimension	Comparative superordinate theme of IF
1. Time perspective: How far in the future an individual projects potential futures or possible future selves, and how well the relationship between past, present, and future actions is understood?	Cognition, reflection, and future-thinking
2. Agency beliefs: How much an individual trusts in their own ability to influence events and achieve results they wish for?	Individual skills and disposition
3. Openness to alternatives: How open an individual thinks the future is and how capable they are in seeing alternative developments?	Individual skills and disposition, and Cognition, reflection, and future-thinking
4. Systems perception: How well an individual understands relationships between different systems and their own role in relation to them?	Contextual factors
5. Concern for others: How much an individual thinks of and cares about the future of other people beyond themselves?	Cognition, reflection, and future-thinking

8.7. The Outcomes

In comparison to earlier components of "The Person" and "The Process", these final two components will be less comprehensive in their contribution to the discussion. This study sought to understand the lived experience of employees with foresight in their organisations. In terms of ontological perspective and phenomenology, the researcher set

out on this journey to approach the research from a worldview that knowledge is the product of individual cognition and is therefore subjective in nature and determined by the unique nature of individuals' experiences (Burrell & Morgan, 1992). Naturally then, unlike a constructionist approach, this study is not focused on producing *measurable* outcomes, but rather in seeking to identify essences that are unique insights used to develop the concepts that become the basis for measurement. "The Outcomes" and "The Context" components of the IF model have emerged as observations from participants' operating in their lifeworld and engaging with what they consider important to their IF experience.

8.7.1. IF knowledge is valuable for policies and procedures

Although one of the smallest coded superordinate themes in the study, 'organisation policies and procedures' was determined a superordinate theme owing to its potential impact on organisational outcomes. Three key findings were presented in relation to organisational policies and procedures. First, incongruence between positive behaviour of employees, regulatory and procedural expectations, and organisational culture can influence IF outcomes. Second, employees with limited IF may benefit from adequate and accurate policies and procedures. And finally, capturing IF knowledge through formalising outcomes of IF in organisational policies and procedures is important for effective KM in organisations. A discussion of the implications of these issues is presented below.

Misalignment of employee values with organisational values may influence outcomes of IF. Regulatory expectations and policies and procedures can encourage positive behavioural expectations (e.g., in terms of reporting and diligence), however, if organisational culture is in conflict with this, it may influence an employees' propensity to act on their IF. This negative outcome for the organisation could be avoided if organisational culture and leadership supported proactive decisions of employees based on outcomes – similar to the objectives of promoting innovation in organisations. This proposition is supported by Szczepańska-Woszczyna (2015) who confirmed that a culture that supports innovation, among other things, includes "a low level of sense of danger felt by employees… support for new concepts and ideas…" and the opportunity to express opinion freely when

proposing or supporting new ideas (p. 401). The important role of organisational culture in supporting IF in organisations will be discussed further in "The Context".

The second key finding in this field is related to the role of organisational policies and procedures in guiding the behaviour of employees who may be perceived as having lower IF. This finding is consistent with insights into positive behavioural changes in employees through increased awareness of policies leading to enhanced compliance of employees (Yuryna Connolly, Lang, Gathegi, & Tygar, 2017); however, education and communication of policies is also paramount (Von Solms & Von Solms, 2004). Implications for HRM practice will be summarised in the Implications for HRM section below.

Finally, capturing IF knowledge in policies and procedures pertains to good KM. This study demonstrates that an employee engaging with IF arguably manifests tacit knowledge through aspects of "The Person" (personal knowledge and experience) and "The Process" (e.g., learning collaboratively) components of IF. KM literature posits that this tacit knowledge, through a process of focus (i.e., reflecting on the knowledge) transforms the knowledge into implicit knowledge (Freeze & Kulkarni, 2007). Implicit knowledge is defined as "knowledge [that] results from the induction of an abstract representation of the structure that the stimulus environment displays, [where] this knowledge is acquired in the absence of conscious, reflective strategies to learn" (Reber in Freeze & Kulkarni, 2007, p. 105), thus the need to focus on the knowledge to bring awareness so it can be "elicited from the expert and documented". Organisations seeking to build foresight competence through their employees will need to consider the role of capturing implicit IF knowledge formally through documents such as policies and procedures.

8.7.2. IF decision-making – are decisions an outcome?

One of the complications of this study was the positioning of 'decision' within the components of the IF model. In investigating the experience of employees with IF, the exploratory nature of the research resulted in detailed accounts of *how* participants made decisions, rather than insightful information about what *types* of decisions were made, perhaps the *impact* of those decisions, or whether decisions led to *better outcomes* because of IF. These are questions that could be addressed through future alternative research

designs aimed at quantifying the value and positioning of aspects of the IF model. The final choice to position decision as an aspect of "The Outcomes' of IF resulted from a reflection by the researcher about the theory of decisions and where decisions happen in that process i.e., toward the end. For example, in one of the most popular decision-making process models (of which the origin remains unclear), an eight-step process involves the generation of alternatives and criteria, an assessment to weight the criteria and then arrive at the "implementation of the alternative" i.e., the decision (prior to evaluating the effectiveness of the decision) (Robbins, DeCenzo, Coulter, & Woods, 2022). Therefore, the decision came after the process of decision-making. In terms of this study, "The Process" component of IF involves activities and cognitions required for decision-making, however, the final decision could be considered an outcome of "The Process". Throughout all stages of the analysis, 'decision' and/or the final action taken by employees have been positioned as aspects of "The Outcomes" component of IF – thus the final positioning of 'decision' in this way. Despite the initial challenge of positioning this superordinate theme, 'decision' data provided a diverse array of experiences in terms of how participants made decisions when experiencing IF. Many of the themes that interact with 'decision' through participant accounts have already been visited in the discussion, so we will only address a few issues here.

One major observation of 'decision' in this study was participants involvement with reflective practices. Reflection plays a crucial role in improving consistency in planning and decision-making (Donovan et al., 2015). The benefits of group decision-making are well-documented in organisational theory. Despite some known disadvantages of collective decision-making such as additional time required, and the influence of over-confident members resulting in sometimes biased (or less accurate) outcomes (Blanchard et al., 2020), among other things, collaborative learning in organisations is a reality for many businesses, as this study has revealed. Team debriefing describes the process that teams undertake when they allow time after an event to discuss actions taken, lessons learned and allow moments of "self-discovery", identifying ways in which the team or individuals within the team may improve and learn, with has shown to improve future performance up to 25% (Tannenbaum & Cerasoli, 2013). In terms of fostering collaborative decision-making benefits

in IF, organisations should consider the value of building reflexive opportunities into work design.

For individual decision-making, personal reflection as well as the opportunity to consult in personal social networks was evident. 'Trust' was important to participants when leaning on their informal social networks for consultation in the IF process. Research acknowledges that trust positively influences knowledge exchange, and enhances the likelihood that knowledge acquired from a trusted colleague is understood and retained (Cross et al., 2008). In terms of considering the role of 'decision', trust, and social networks in IF, it will be important for organisations to acknowledge the important role of collegial consultation and reflection in the 'decision' process for IF. Given the contributions of reflection and collaborative learning to KM (Cheong & Tsui, 2011), and the intention of this research to contribute to the microfoundations of organisational knowledge (such as IF), these will be important considerations for HRM practitioners in fostering IF in organisations too.

8.7.3. Employees propensity to act (or not!) on foresight

As mentioned, this study did not adopt a constructionist approach to establishing the measured outcomes of the foresight process. Instead, recollections about *how* employees acted as an outcome of their IF revealed rich insights about the challenges, implications and emotions that influenced participant's propensity to act, or otherwise, on their foresight. The findings section (section 8.1.3) for this superordinate theme focused on the case of *Alistair*. This case highlighted several phenomena in organisations that may prevent the full benefits of IF outcomes being realised.

First, openness and approachability of supervisors and leaders may influence employee's propensity to act on their IF. In this sense, 'act' means either reporting an issue they've established through their IF or physically acting to prevent a negative outcome or contribute to a positive outcome as a result of their IF. There is an importance in creating psychological safety through leadership approachability to encourage error reporting in the workplace, a finding recently supported by Wawersik and Palaganas (2022). However,

openness and approachability of leaders is only one aspect that may encourage employees to act on their IF.

Organisational culture, which will be explored in more detail in "The Context" section, holds the potential to influence employee behaviour in terms of acting on IF. For example, perceived psychological safety will either encourage or discourage employees to act on their IF, depending on whether they feel safe to do so (Zhu et al., 2022). In addition, the risk-taking tolerance of the organisation can influence how comfortable employees feel taking risks with the possibility of failure. Relevant to innovation and creativity in organisations, a level of risk tolerance can foster organisational learning (Chiva et al., 2007) and encourage employees to try new ideas – or in this case – enact their IF. The next section will discuss significant contributions of this study to organisational-level strategies relevant to IF.

8.8. The Context

The final component of the IF model to be explored in terms of theoretical contribution of this study is "The Context". This phenomenological study was undertaken in the lifeworld of employees, therefore the context in which IF has been researched, and insights were gained, were the organisations of participants. There are three major areas of focus this discussion will address: Issues associated with the participants' job (e.g., contextual influence of job design and role, stress, autonomy, and empowerment etc.); leadership-related issues (e.g., style, supervisory relationship, role of trust and openness etc.); and organisation-level cultural and strategic issues (e.g., risk-taking tolerance, organisational learning, KM etc.). The discussion begins with a focus on the contextual factors that emerged about jobs and work itself – in relation to IF experience in organisations.

8.8.1. Employee perceptions and IF behaviour

One of the expectations of this study was that certain jobs might enable IF while others may prevent or not present opportunities to develop or use IF. Whilst the study revealed limited findings in relation to job 'type' and opportunity for IF (nearly all jobs presented IF opportunities), the study did reveal other factors that impacted the use of IF in

jobs. Stress was reported to influence IF use for employees – both in positive and negative ways. It was reported by some participants that stress reduced the use of IF by employees, reportedly making it difficult for them to draw on their IF. While eustress (good stress) facilitates work performance (Faiz et al., 2022) and can even improve performance and act as a coping mechanism (Nangia in Faiz et al., 2022); distress (bad stress), defined as "outcomes associated with negative stress which cause a deviation from healthy physiological, psychological and affective functioning" (Quick in Hargrove, Hargrove, & Becker, 2016) explains why some employees feel their IF experience was depleted when work was stressful. In terms of the relevance of stress in the workplace, most HRM professionals are aware of the potential for stress to affect worker's quality of work life and performance, however, this will be a consideration for them when seeking to develop IF in their employees.

This study reported that previous attitudes held by supervisors or leaders created diverse, and usually negative, opportunity for autonomy or empowerment in jobs related to encouraging IF. A shift in the understanding and value of new knowledge creation and the influence of transformational leadership in inspiring workers to engage in innovative work behaviour (Li et al., 2019) has resulted in changes to organisations' value of individual insights and knowledge. This study, to the best of the researcher's knowledge, is the first of its kind to seek understanding about the motivators behind IF behaviour in organisations. Although only conveyed by some participants, organisations that value IF behaviour – demonstrated through reward and recognition practices – reportedly encourage employees to continue IF behaviour. Putting these practices in place would arguably help overcome the finding in this study that some employees feel their "IF is not appreciated" by their organisation. Fostering a culture of foresight behaviour and considering other HRM practices to encourage inspiring leadership should also address this issue and will be discussed in the Implications for HRM section below.

8.8.2. Leadership can foster or destroy IF in organisations

As discussed above, the influence of leadership in fostering positive organisational cultures is well established. Leadership / supervisory style and the way in which authority

and power are wielded in organisations can have a far-reaching impact on employee behaviour (Fast, Burris, & Bartel, 2014; Wang, Sun, & Cai, 2021). One disturbing finding was that some employees experienced a sense of fear regarding using their employee voice to act on their IF. As discussed previously, a culture that discourages knowledge sharing or new insights from employees could result in devastating outcomes for organisations. It is crucial for organisations to create psychological safety for employees so they feel safe and welcome to voice their IF (Zhu et al., 2022) However, organisations can combat issues related to leadership and supervisory style or cultures that impact negatively on employee behaviour. HRM practices can offer development opportunities for leaders or supervisor, or field suitable employees that align with existing cultural norms. appropriate recruitment and selection strategies) and through build a culture of openness, approachability and risk tolerance that supports new knowledge sharing from employees and provides psychological safety for employees.

8.8.3. Culture, knowledge management, foresight competence and organisational competitiveness

Culture is the foundation on which organisations can build capability. As discussed, cultural factors influence the way in which leaders and employees behave and feel toward their jobs and organisation. If organisations are to establish a culture of foresight, where foresight is established as an organisational capability (Tsoukas & Shepherd, 2004), they will need to understand the microfoundations of IF and establish its role in contributing to DKC capability in organisations. Encouraging IF behaviour through open, approachable, and trustworthy leadership, and instilling HRM practices that foster appropriate risk-taking, reward foresightful behaviour, and support and nurture IF outcomes will establish solid foundations on which to establish foresight competence. As proponents like Major et al. (2001) argue, through establishing foresight competence an organisation improves its potential to attain a sustained competitive advantage. However, only through establishing IF as a KBDC will this become achievable (Zheng et al., 2011). Given the knowledge-intensive nature of IF, organisations will also need to excel in KM practices that develop, capture, and share IF outcomes.

KM practices should drive IF focus in organisations. IF is a knowledge-driven capability, which manifests, as this study has demonstrated, in the personal knowledge and experience of employees, and is fostered and developed through a collaborative process of knowledge sharing. IF knowledge is often tacit in nature, so resides with individual employees. Strategic HRM practices are therefore required to foster processes that transfer this knowledge into implicit knowledge that can then be captured and represented in explicit ways (e.g., organisational policy and procedures). In addition, results from this study confirm that personal knowledge and experience often resides in long-term tenured employees (Joe, Yoong, & Patel, 2013), placing an importance on processes that maintain employee job satisfaction, engagement and loyalty to reduce turnover.

Finally, in relation to culture the role of trust and leadership in fostering a culture of psychological safety where employees can speak about and act upon their IF will be crucial to encourage IF behaviour from employees. Systems of reward and acknowledgement that provide extrinsic motivation to encourage IF behaviour will be important. Designing work to manage stress where employees are operating in a highly regulated environment, as well as providing the right support and 'messaging' to employees around behaviour expectations aligned with values and procedures will all contribute to building a foresight culture. Encouraging transformational leadership in organisations will help retaining valuable knowledge-based assets – which should be a priority for building foresight competence. Findings of research sub-question (RS-Q1) one will now be presented along with implications of this research for HRM.

8.9. Implications for HRM

The ability for HRM professionals and organisations to develop strategies and practices that support IF is vital in capturing IF knowledge for improved organisational outcomes. HRM strategies can target the sourcing, retention, performance management, and development of valuable IF talent, essential for avoiding "knowledge loss induced by organizational member turnover" (Galan, 2023, p. 2), and instead, enhance knowledge competence of the firm (Haesli & Boxall, 2005). In fostering a culture of foresight, SHRM practices should target the development and implementation of policies and practices

aligned with the findings of this study, which will support a culture of organisational learning (OL); with knowledge creation, sharing and dissipation the key objectives. This focus on KM will position the organisation competitively, and through utilising research outcomes from studies such as this one, organisations can seek to work with the microfoundations of knowledge capabilities that 'underpin the development and transformation of productive resources' (Boxall, 1996, p. 66). A KM approach to IF requires HRM practices that seek to build foresight competence through developing key cognitive and KBDCs. This discussion proposes a number of HR practices that would best support the findings of this research in building foresight competence in organisations.

8.9.1. Sourcing IF Talent

Talent management is key to effective KM in organisations. HRM practices that integrate talent and KM practices have been shown to be effective particularly in identifying talent, and focusing on knowledge creation, sharing and retention, as well as developing knowledge competencies (Whelan & Carcary, 2011). In terms of this study, recruitment and selection strategies targeted at sourcing IF talent for organisations will need to consider knowledge and skills pertaining to IF performance. For example, the ability for employees to think about the future when working, undertake reflection when required, work collaboratively, as well as be able to assess and prioritise tasks are all key to IF ability. Findings also suggest that inquisitiveness, or an 'openness to experience' (McCrae & Greenberg, 2014) is an important individual trait for IF engagement. Bourmistrov and Amo (2022) support the desire to seek individuals with certain foresight cognitive styles that can lead to creativity and proactivity in their work. In addition, some of these propensities, namely future-thinking ability and openness to experiences could be captured through administering the *Futures Consciousness* scale to potential candidates (Ahvenharju et al., 2021). As the authors of the FC Scale explain, the scale may identify differences in the outcome of futures thinking between individuals, but also identify how contextual factors may influence individuals' future-thinking in different ways (Ahvenharju et al., 2021). The FC Scale is still in its infancy, however, consideration of its application – or knowledge that such a measure is being developed, may assist HRM practitioners in determining some aspects of IF at the selection stage.

In addition to the skills discussed, the knowledge-based essence of IF places greater importance on industry or organisation specific knowledge, particularly in the absence of adequate knowledge transfer mechanisms. In this sense, internal recruitment strategies may benefit certain roles requiring specific organisational-based knowledge for performance. However, again, effective KM strategies could combat this need if tacit knowledge is captured well in explicit policies and procedures required to carry out tasks.

Two other skills worth highlighting due to their role in developing foresight or conveying foresight outcomes are reflection and emotional intelligence. Central to many of the aspects of the IF Model (learning collaboratively, cognition, reflection, and future-thinking, 'decision' and taking action) reflection is a skill that could either be sought in new recruits or developed in existing employees. Processes related to encouraging group reflection practices central to IF outcomes will be discussed in the training and development section below. EI has been established as contributing to overall effectiveness of managers and leaders in organisations (Doe, Ndinguri, & Phipps, 2015), and this study has shown its value at the employee level and in supporting the effectiveness communication of IF outcomes. Measuring EI is a practice many organisations have already implemented either in recruitment or in employee development efforts (Muyia, 2009). Findings of this study indicate these practices and the identification of EI skills will be beneficial for fostering IF. Efforts to recruit and select employees with the propensity for foresight, or that seek to identify and develop foresight in existing employees, support the RBV of the firm, acknowledging the enormous value of attracting, retaining, and developing valuable human capital for firms. This is a view shared by Haesli and Boxall (2005) who posit that organisations should focus on recruiting and retaining employees with valuable and rare knowledge and skills that will contribute to organisational competitiveness.

8.9.2. Designing work and workplaces to support IF

Although not heavily featured in the data itself, work design and the way in which workplaces support practices utilised by employees in IF (e.g., collaborative learning) will be vital to creating an environment that fosters both IF and organisational learning. Planning for collaborative learning is now an expected undertaking for many organisations when

designing workspaces and can influence levels of focus and happiness among employees (Baranski et al., 2023). Whilst COVID-19 presented challenges to collaborative learning due to social distancing measures, organisations found creative ways to continue valued opportunities for connection in the workplace (Waizenegger, McKenna, Cai, & Bendz, 2020). In addition to considering the design of physical workplaces, organisations seeking to foster IF will need to allow for increased capacity in work for employees to 'take time' for reflection-in-action and reflection-on-action in their jobs. The findings from this research showed the consistent role of reflection in IF. Many of the participants commented on the lack of time available to engage in this important activity, an action that has been associated with fostering lifelong learning and development in organisations (Goh, 2019).

One type of role where study outcomes showed increased pressure and requirement for IF was when employees were working in positions demanding strict regulatory reporting requirements. In terms of HRM implications, and based on participant comments through the study, it would be valuable to consider the role of policies and procedures in supporting adequate responses both from employees, and toward employees, fulfilling expectations in this context. Future-thinking featured in these roles as well, where employees often described a process of *reflection-in-action* that led to positive outcomes in terms of the regulatory reporting requirements. A focus on future-thinking implies a dependence on personal past experience and knowledge (or effective policies and procedures that guide action), and collaboration and / or networking in the process of developing understanding. With reflection, experience, and collaboration key to these roles, HRM practices will need to consider not only the personal qualities of incumbents but also the way work and how workspaces are designed to facilitate IF as needed.

8.9.3.   The role of training and development in fostering IF

As discussed, this study revealed many insights regarding both employees' and leaders' knowledge, skills, and abilities pertinent to IF in organisations. For employees, skills for collaboration, reflection, future-thinking, personal cognition, intuition, assessing and prioritising tasks, emotional intelligence and storytelling were all central to IF. HRM practitioners already have development programs for many of these skills based on the

value of knowledge already established in successful organisations. In fact, HRM practitioners from Phase One remarkably perceived that many of these skills would be needed for IF – they just didn't understand why or how to enact supportive practices. In addition, development for leaders in terms of openness and approachability when addressing IF outcomes will be important. The alignment between HRM practitioner perceptions, and outcomes of this study in relation to IF skills, highlights the strong awareness and value of knowledge that already exists in organisations. This positions the research outcomes of this study as an exciting opportunity for HRM practitioners to focus on fostering IF as a crucial component of their KM strategy.

A less understood aspect of IF for HRM practitioners may be how the attitude of employees and leaders can influence engagement with IF, outcomes of IF, or how IF outcomes are received by others. Self-confidence was identified by participants as important to how they act on their IF, or whether they communicate their IF to others (usually senior colleagues). Management response has been experienced as negative, or even threatening for some participants, which can impact both the employees' response to their IF (to act or not) and their propensity to use their IF in the future. From a training and awareness perspective, HRM practitioners will need to work to develop a positive culture around IF and how the organisation values and responds to employee IF outcomes. Establishing this culture (discussed further below) will encourage employees and leaders to approach their work in ways that are more supportive of foresight too – such as being 'inquisitive' and encouraging risk tolerance – which was identified as key to IF performance. However, longer-term tenure employees may show some resistance to adopting new strategies as the study revealed.

Longer-term tenure employees can experience a lack of commitment to organisational endeavours associated with being forward-looking in their jobs. Participants described a sense of 'institutionalisation' in their more experienced colleagues. It would be beneficial for HRM practitioners to identify employees who fall into this category for several reasons. First, as the study has confirmed and the KBV of the organisation posits, personal knowledge and experience is a key source of competitive advantage for firms. Turnover is one of the largest contributors to loss of organisational knowledge (Serenko, 2022). It is vital for

organisations to capture, manage and share the tacit knowledge that often resides in experienced employees – in an explicit way accessible by other less experienced employees. One way to facilitate this process is through formal mentoring schemes (Mazorodze & Buckley, 2020). Another is to appeal to long-term tenured employees through providing attractive work conditions, an appropriate image of their work, and opportunities for empowerment as identified earlier by Lamberti et al. (2022). In addition, these workers may benefit from training in newer technologies that aim to capture foresight outcomes, or from job rotation strategies that aim to reduce the potential for these employees to become too entrenched in their daily routines (Carson & Carson, 1997). This is discussed further in the KM section of HRM implications below.

Through the identification of employee and leader needs in relation to IF skills - and addressing the attitudes of recipients of HRM's strategies for IF - organisations will be well-positioned in terms of building foresight competence. Taking this approach would ensure organisations are investing in practices that support the development of dynamic capabilities as suggested by Teece (2007). Additional benefits should also be observed through the enhanced competence and use of IF in people's work, potentially resulting in outcomes such as improved safety incident rates, increased efficiencies in everyday jobs, improved compliance with regulatory reporting, and other associated long-term benefits related to knowledge competence for the firm.

8.9.4. Supporting IF performance through performance management and reward

Enhancing existing HRM performance management practices to encourage IF will be essential for organisations to experience sustained IF behaviour and outcomes. Reward and recognition for desired IF behaviour will encourage employees to invest time, embrace developmental opportunities and seek to utilise IF in their work activities. Strategies to encourage participation by more experienced organisational members in mentoring programs can be built into performance management systems (Mazorodze & Buckley, 2020). Implementing reward strategies that appeal to employees of different generations and experience will result in attractive reward programs that foster IF as desired (Acheampong, 2021; Kollmann, Stöckmann, Kensbock, & Peschl, 2020).

An additional consideration for HRM practitioners is the suggestion to utilise IF in the goal-setting stage of performance management. Through utilising visualisations, utilising episodic foresight, Atance and O'Neill (2001) advocate that the commitment and attainment of goals will be higher. This may be an opportunity for future research to establish potential advantages of utilising IF in goalsetting for employees and the firm.

8.9.5. Fostering a supportive culture for IF

Outcomes of this research identified several ways in which HRM practitioners could help build a supportive culture for IF. As discussed, adopting a KM approach when developing policies and practices will shape an organisation's culture to be one where employees and leaders see IF as an organisation-wide learning opportunity. In this sense, IF culture should align with an organisational learning culture, where employees and leaders alike acknowledge, value, and remain committed to knowledge creation and sharing. In addition, HRM departments will need to embrace a sociotechnical approach to managing the process and outcomes of IF in their organisations (Chowdhury, Budhwar, Dey, Joel-Edgar, & Abadie, 2022).

Effective leadership that provides encouragement and support of IF activities is crucial. HRM practices, incorporating leadership development, can facilitate a culture of psychological safety for employees, where IF and intuitive decision-making (where needed) is embraced, rewarded, and encouraged. (For a more detailed exploration of the dynamic process of organisational learning in relation to intuiting, interpretation, integration and institutionalisation - see Crossan, Lane and White's (1999) discussion on the 4I Model). Risk tolerance can be established to support new IF outcomes through well-aligned policies, rewards, and leadership messaging - with an emphasis on collaborative learning and shared benefits for organisational members. Transformational leadership has been shown to promote a culture of trust and empowerment, as needed to foster IF behaviour (Li et al., 2019). Collaborative learning and social networking can be supported through establishing well-designed workspaces and allowing individuals and groups time for reflection (Baranski et al., 2023). And finally, organisational change initiatives could be communicated transparently to encourage commitment and ownership by employees, highlighting ways in

which employees can utilised future-thinking to consider outcomes of their work in relation to facilitating change objectives. The ultimate challenge for HRM practitioners in relation to IF, however, may be how they will capture new IF insights knowledge to contribute to organisational learning.

The effective management of IF knowledge will come down to an organisation's KM strategies. Through fostering a culture that promotes IF knowledge creation (e.g., team reflection opportunities, social networking etc.,), implements - and then trains employees - in ICT systems that capture new IF knowledge outcomes (to be easily accessed), and then ensuring new knowledge is shared through means such as storytelling, mentoring, and/or new policies and procedures, the collective wisdom of IF for organisations will knowledge capability for the organisation.

8.10.   Implications for methodology

Interpretative phenomenological analysis is "being used to address an ever-wider range of research questions in an expanding array of disciplines" (Eatough & Smith, 2017). This study is no exception and offers a contribution to the methodology in terms of the large scale of the IPA sample. IPA typically involves smaller sample sizes of five or six participants, as discussed in Chapter Three. However, the IPA component of this study had a very large sample size of 27 participants. Despite this, the researcher felt they successfully remained close to individuals' experiences with IF in their lifeworld and the data provided rich and remarkable insights into the idiosyncratic nature of employees' experiences with IF in their organisations. Successful transition of a large data set including *life texts,* reflexive memos, and conceptual maps, to electronic format utilising NVivo software (for interview transcripts and memos), Microsoft Excel spreadsheets (for van Manen (1990) *theming* and the development of sunburst charts) and Microsoft Word (for initial noting) facilitated immersion of the researcher in the data. In addition, a sequential methods approach adopting thematic analysis provided valuable insights from HRM practitioners to inform the process of interpretation in the Phase Two phenomenological study.

Phase One interviews with HRM practitioners brought *rigour* (Guba & Lincoln, 2005; Yardley, 2000) to the analysis, utilising expert-informed knowledge to develop Phase Two

IPA interview protocols. By accessing the knowledge of HRM professionals, the potential implications of IF were identified and considered in the IPA process. Without this input, the researcher may have been limited in terms of the interpretation required to bring value and richness to the Phase Two approach. This unique opportunity also results in data from the study being more easily relatable. That is, it is not only theoretically relevant to psychology and business literature - but is also practically relevant to the world of HRM practitioners and organisations. Yardley (2000) posits that sensitivity to context is one characteristic of valid qualitative research. This research was positioned deep within existing foresight literature across the disciplines of psychology and organisational theory. In addition, the research was conducted with real-life employees in their real working lifeworlds – their organisations. The researcher endeavoured to stay as close as possible to the lifeworld of participants, as well as incorporate emergent themes stemming from HRM practitioners (within the same lifeworld as Phase Two participants') into the study.

In terms of commitment, rigour, transparency and coherence (Yardley, 2000) the researcher persisted with the often overwhelming task of meticulously applying an IPA approach to every stage of the Phase Two IPA process, from data collection through to the methodological competence and skills developed in analysis. The thesis aims to present a transparent and thorough explanation of the analysis journey and hopes to provide guidance to future researchers embarking on large-scale IPA analysis studies. Finally, Yardley (2000) encourages qualitative researchers to consider the impact and importance of their contribution. The final section of the study (to follow) will detail the limitations and future research agenda for IF research, and in doing so aims to meet the final validity requirements for this study.

One disappointing methodological limitation was the exclusion of *Consideration of Future Consequences* (CFC) data gleaned from participants in their pre-preparation for their interviews. Although initial quantitative analysis was undertaken on this data, space limitations of the thesis would not have permitted adequate explanation and analysis of this data to warrant its inclusion. However, the researcher believes that the rich insights gained from the study will potentially inform both the CFC and the newer *Futures Consciousness* (FC) scale in the future.

8.11. Limitations and a future research agenda

Through investigating IF with a qualitative research design across two industries, this study has revealed the multi-faceted and complex interactional nature of IF in organisations. However, the research has several limitations and presents a number of dilemmas, which in turn reveal opportunities for a future research agenda. These limitations and dilemmas will be explored with proposed opportunities for research that will continue the foray into understanding IF and its potential contribution to organisational success.

Firstly, IF, in the context of how it manifests in humans operating within organisations, is not a concrete object to be easily identified, measured, and defined in organisations. As such it was only revealed through shared understanding of its meaning between researcher and participant. It should be acknowledged that this research does not 'measure' IF in organisations, nor does it measure how human memory systems facilitate foresight, as previous studies in psychology have endeavoured (Atance & Sommerville, 2014; Martin-Ordas et al., 2014; Suddendorf et al., 2011). There is no question though that employees' foresight is dependent on their ability to recall past experience and knowledge and imagine future scenarios to make decisions (Martin-Ordas, Atance, & Louw, 2012; Suddendorf & Corballis, 2007). Recent interest around how neuroscience might help organisations understand the role of memory systems in foresight-related activities (Conway, 2022; Rhemann, 2019) invites several questions of interest to this study. For example, what is the significance between time spent in a specific context (building memories of experience and knowledge) and ability to project successful future scenarios for work outcomes? What period of time must elapse before humans that experience an event (lessons learned) in the past, no longer recollect details enough to adequately predict future outcomes in a similar scenario? And at what age does our ability to recall past experience decline, such that there might be an optimal time in which we share and capture our knowledge and experience for others?

Secondly, organisations are interested in measuring performance outcomes of Human Resource Management (HRM) strategies or practices. The challenge of effectively measuring long-term strategic HRM practices and their influence on organisational outcomes has been

debated in the literature (Angrave, Charlwood, Kirkpatrick, Lawrence, & Stuart, 2016; Fernandez & Gallardo-Gallardo, 2021), and remains a difficult endeavour for most HRM practitioners. Measuring the influence of IF on organisational outcomes is anticipated to be as difficult an endeavour. Rather than targeting overall organisational performance, the outcomes of this exploratory study present a framework in which HRM practitioners and researchers can position strategies related to the components of the IF model. These strategies should seek to develop, capture, and utilise valuable IF knowledge in organisations. For example, organisations may seek to foster more reflective practices for teams, introduce new Information Communications Technology (ICT) systems that capture IF outputs from important events, tailor selection strategies to seek employees with IF, implement training programs targeted at important IF aspects such as future-thinking, collaboration, mentoring, and more. Attempting to measure a single or higher-order organisational performance measure may not fully capture the intention of IF and the IF framework. Instead, organisations should seek to measure associated IF strategies such as IF outcomes of reflective groupwork, storytelling propensity of experienced employees in transferring IF knowledge, intuition used in IF decisions, and the effectiveness of informal social networks in filling knowledge gaps. These strategies should be measured in the context of fostering IF practices and knowledge outcomes for organisations. This implies that researching IF in the future may require more formalised measurement scales. This research provided the qualitative insights needed to identify key dimensions on which the IF model is founded. These dimensions could now be validated through future research endeavours (i.e., moving meanings to measurement), which are likely related to the next point.

Finally, this research had the potential to explore differences of IF in the two organisational contexts, and other individual differences (e.g., gender, age, education), across two industries. However, limitations around scope constrained the focus of the research to the sample taken. In addition, a limitation of the sampling method, which potentially stemmed from ethical considerations around protecting the identity of participants in their organisations, was allowing participants to self-select for the study. Some participants confirmed their personal interest in foresight as a motivator for engaging

as a participant. This could have limited the potential benefit of a more narrowly selected sample of participants in jobs identified as requiring foresight. For example, if participants were identified as positioned in jobs that HRM executives deemed as requiring foresight – the current coding breadth would have been substituted for depth.

Future research, as proposed previously, could investigate the different industry contexts within which a more nuanced understanding of the IF model could be developed. At the other extreme, undertaking IPA across two different industry contexts has benefited the study by providing a more rounded analysis underpinning the results featured in the final IF model. A question to be answered could be how does disentangling industry inform more specific HRM implications for IF? And, to what extent would engaging employees from a wider variety of industries provide different results? For example, it may be that in one industry IF focus for individuals is more achievement-oriented, seeking future benefits of outcomes at a personal level, whereas in another industry IF, as collaborative, may be essential for determining key success factors, e.g., in emergency incident response. To an extent, the industries utilised in this research have provided beneficial dimensionality to the emerging IF model, but this research is not complete or exhaustive.

8.12. Concluding remarks

Employees, with their unique knowledge and experience, passion, curiosity, and commitment to helping their organisations thrive, are at the epicentre of organisational success. The Knowledge Based View of organisations posits that without the knowledge and expertise of committed and talented employees, organisations simply would not exist. This research, targeted at understanding the individual experience of foresight in organisations, aims to inspire organisations to act in supportive, educational, and innovative ways to identify, foster and develop IF in their employees. Through aligning IF strategies with pro-active, informed Knowledge Management practices, organisations will be positioned to utilise IF outcomes from organisational members at all levels. Capturing valuable and rare tacit knowledge of experienced or forward-looking employees through well-designed processes and compatible ICT systems, will enable the development of explicit knowledge mechanisms to facilitate foresightful decision-making. This research, privileged in its

position of entering the life of participants to understand, assess and interpret work activities they partake in every day, seeks to honour the work, thoughts and actions of employees and managers, and through the interpretive lens of the researcher, offer thoughtful ways in which organisations can build foresight competence through their employees. It is hoped that further research endeavours centred on IF will develop and validate components of the IF Model to position its longevity and application across multiple industries promoting far-reaching positive outcomes for organisations.

Reference List

Acheampong, N. A. A. (2021). Reward Preferences of the Youngest Generation: Attracting, Recruiting, and Retaining Generation Z into Public Sector Organizations. *Compensation & Benefits Review, 53*(2), 75-97.

Addis, D. R., Wong, A. T., & Schacter, D. L. (2008). Age-Related Changes in the Episodic Simulation of Future Events. *Psychological Science, 19*(1), 33-41. doi:10.1111/j.1467-9280.2008.02043.x

Ahuja, G., Coff, R. W., & Lee, P. M. (2005). Managerial Foresight and Attempted Rent Appropriation: Insider Trading on Knowledge of Imminent Breakthroughs. *Strategic Management Journal, 26*(9), 791-808. doi:10.1002/smj.474

Ahvenharju, S., Lalot, F., Minkkinen, M., & Quiamzade, A. J. F. (2021). Individual Futures Consciousness: Psychology Behind the Five-Dimensional Futures Consciousness Scale. *Futures, 128*, 1-18. doi:10.1016/j.futures.2021.102708

Aklamanu, A., Degbey, W. Y., & Tarba, S. Y. (2016). The Role of Hrm and Social Capital Configuration for Knowledge Sharing in Post-M&a Integration: A Framework for Future Empirical Investigation. *The International Journal of Human Resource Management, 27*(22), 2790-2822.

Al-Zoubi, M. O., Masa'deh, R. e., & Twaissi, N. M. (2022). Exploring the Relationship among Structured-on-the Job Training, Mentoring, Job Rotation, Work Environment Factors and Tacit Knowledge Transfer. *VINE Journal of Information and Knowledge Management Systems*. doi:10.1108/VJIKMS-06-2022-0199

Al Khajeh, E. H. (2018). Impact of Leadership Styles on Organizational Performance. *Journal of Human Resources Management Research, 2018*, 1-10. doi:10.5171/2018.687849

Alavi, M., & Leidner, D. E. (2001). Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly, 25*(1), 107-136. doi:10.2307/3250961

Alzoubi, H. M., & Aziz, R. (2021). Does Emotional Intelligence Contribute to Quality of Strategic Decisions? The Mediating Role of Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(2), 130. doi:10.3390/joitmc7020130

Amanatidou, E., & Guy, K. (2008). Interpreting Foresight Process Impacts: Steps Towards the Development of a Framework Conceptualising the Dynamics of 'Foresight Systems'. *Technological Forecasting and Social Change, 75*(4), 539-557. doi:10.1016/j.techfore.2008.02.003

Amsteus, M. (2008). Managerial Foresight: Concept and Measurement. *Foresight, 10*(1), 53-66. doi:10.1108/14636680810856026

Amsteus, M. (2011a). Managerial Foresight: Measurement Scale and Estimation. *Foresight, 13*(1), 58-76. doi:10.1108/14636681111109705

Amsteus, M. (2011b). Managers' Foresight Matters. *foresight, 13*(2), 64-78. doi:doi:10.1108/14636681111126256

Amsteus, M. (2012). The Origin of Foresight. *World Futures, 68*(6), 390-405. doi:10.1080/02604027.2012.693853

Andresen, L., Boud, D., & Cohen, R. (2020). *Experience-Based Learning*. London: Routledge.

Angrave, D., Charlwood, A., Kirkpatrick, I., Lawrence, M., & Stuart, M. (2016). Hr and Analytics: Why Hr Is Set to Fail the Big Data Challenge. *Human Resource Management Journal, 26*(1), 1-11. doi:10.1111/1748-8583.12090

Ansari, A. H., & Malik, S. (2017). Ability-Based Emotional Intelligence and Knowledge Sharing: The Moderating Role of Trust in Co-Workers. *VINE Journal of Information and Knowledge Management Systems*.

Atance, C. M. (2015). Young Children's Thinking About the Future. *Child Development Perspectives, 9*(3), 178-182. doi:10.1111/cdep.12128

Atance, C. M., Louw, A., & Clayton, N. S. (2015). Thinking Ahead About Where Something Is Needed: New Insights About Episodic Foresight in Preschoolers. *Journal of Experimental Child Psychology, 129*, 98-109. doi:10.1016/j.jecp.2014.09.001

Atance, C. M., & O'Neill, D. K. (2001). Episodic Future Thinking. *Trends in Cognitive Sciences, 5*(12), 533-539. doi:10.1016/s1364-6613(00)01804-0

Atance, C. M., & Sommerville, J. A. (2014). Assessing the Role of Memory in Preschoolers' Performance on Episodic Foresight Tasks. *Memory, 22*(1), 118-128. doi:10.1080/09658211.2013.820324

Balaraman, K. K., & Sundarraj, R. (2017). *Individual Foresight Capability in Organizations: Role of Information Acquisition*. Paper presented at the 2017 IEEE Technology & Engineering Management Conference (TEMSCON), Santa Clara, CA, USA.

Baranski, E., Lindberg, C., Gilligan, B., Fisher, J. M., Canada, K., Heerwagen, J., . . . Mehl, M. R. (2023). Personality, Workstation Type, Task Focus, and Happiness in the Workplace. *Journal of Research in Personality, 103*, 104337. doi:10.1016/j.jrp.2022.104337

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. doi: 10.1177/014920639101700108

Barney, J., & Felin, T. (2013). What Are Microfoundations? *Academy of Management Perspectives, 27*(2), 138-155.

Baškarada, S., Shrimpton, D., & Ng, S. (2016). Learning through Foresight. *Foresight, 18*(4), 414-433. doi:10.1108/FS-09-2015-0045

Ben Hador, B. (2016). How Intra-Organizational Social Capital Influences Employee Performance. *Journal of Management Development, 35*(9), 1119-1133.

Ben Hador, B. (2017). Three Levels of Organizational Social Capital and Their Connection to Performance. *Journal of Management Development, 36*(3), 348-360.

Bevan, M. T. (2014). A Method of Phenomenological Interviewing. *Qualitative Health Research, 24*(1), 136-144. doi:10.1177/1049732313519710

Blanchard, M. D., Jackson, S. A., & Kleitman, S. (2020). Collective Decision Making Reduces Metacognitive Control and Increases Error Rates, Particularly for Overconfident Individuals. *Journal of Behavioral Decision Making, 33*(3), 348-375. doi:10.1002/bdm.2156

Boden, H., Labuschagne, L. G., Hinten, A. E., & Scarf, D. (2017). Episodic Foresight Beyond the Very Next Event in 3‐and 4‐Year‐Old Children. *Developmental Psychobiology, 59*(7), 927-931. doi:10.1002/dev.21544

Bollinger, A. S., & Smith, R. D. (2001). Managing Organizational Knowledge as a Strategic Asset. *Journal of Knowledge Management, 5*(1), 8-18. doi:10.1108/13673270110384365

Bootz, J.-P., Durance, P., & Monti, R. (2019). Foresight and Knowledge Management. New Developments in Theory and Practice. *Technological Forecasting and Social Change, 140*, 80-83. doi:10.1016/j.techfore.2018.12.017

Boxall, P. (1996). The Strategic Hrm Debate and the Resource‐Based View of the Firm. *Human Resource Management Journal, 6*(3), 59-75. doi:10.1111/j.1748-8583.1996.tb00412.x

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on Reflexive Thematic Analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. doi:10.1080/2159676X.2019.1628806

Brimeyer, T. M., Perrucci, R., & Wadsworth, S. M. (2010). Age, Tenure, Resources for Control, and Organizational Commitment. *Social Science Quarterly, 91*(2), 511-530. doi:10.1111/j.1540-6237.2010.00705.x

Burrell, G., & Morgan, G. (1992). *Sociological Paradigms and Organisational Analysis : Elements of the Sociology of Corporate Life*. Aldershot, England: Ashgate Publishing Company.

Campbell, T. T., & Armstrong, S. J. (2013). A Longitudinal Study of Individual and Organisational Learning. *The Learning Organization, 20*(3), 240-258.

Carson, K. D., & Carson, P. P. (1997). Career Entrenchment: A Quiet March toward Occupational Death? *Academy of Management Perspectives, 11*(1), 62-75.

Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). *Applied Business Research: Qualitative and Quantitative Methods*: John Wiley & Sons Australia.

Charmaz, K. (2005a). Advancing Social Justice Research. In N. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.). Thousand Oaks, California: Sage Publications, Inc.

Charmaz, K. (2005b). Grounded Theory in the 21st Century. In N. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.). Thousand Oaks, California: Sage Publications, Inc.

Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed.). London: Sage.

Chen, G., Sharma, P. N., Edinger, S. K., Shapiro, D. L., & Farh, J.-L. (2011). Motivating and Demotivating Forces in Teams: Cross-Level Influences of Empowering Leadership and Relationship Conflict. *Journal of Applied Psychology, 96*(3), 541.

Cheng, S., Werning, M., & Suddendorf, T. (2016). Dissociating Memory Traces and Scenario Construction in Mental Time Travel. *Neuroscience & Biobehavioral Reviews, 60*, 82-89. doi:10.1016/j.neubiorev.2015.11.011

Cheong, R. K., & Tsui, E. (2011). From Skills and Competencies to Outcome‐Based Collaborative Work: Tracking a Decade's Development of Personal Knowledge Management (Pkm) Models. *Knowledge and Process Management, 18*(3), 175-193. doi:10.1002/kpm.380

Chia, R. (2004). Re-Educating Attention: What Is Foresight and How Is It Cultivated. In H. Tsoukas & J. Shepherd (Eds.), *Managing the Future: Foresight in the Knowledge Economy* (pp. 21-37). USA: Blackwell Publishing.

Chiva, R., Alegre, J., & Lapiedra, R. (2007). Measuring Organisational Learning Capability among the Workforce. *International Journal of Manpower, 28*(3/4), 224-242. doi:10.1108/01437720710755227

Chowdhury, S., Budhwar, P., Dey, P. K., Joel-Edgar, S., & Abadie, A. (2022). Ai-Employee Collaboration and Business Performance: Integrating Knowledge-Based View, Socio-Technical Systems and Organisational Socialisation Framework. *Journal of Business Research, 144*, 31-49.

Claessens, B. J., Van Eerde, W., Rutte, C. G., & Roe, R. A. (2007). A Review of the Time Management Literature. *Personnel Review*.

Claessens, B. J., Van Eerde, W., Rutte, C. G., & Roe, R. A. (2010). Things to Do Today...: A Daily Diary Study on Task Completion at Work. *Applied Psychology, 59*(2), 273-295.

Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic Analysis. In J. A. Smith (Ed.), *Qualitative Psychology: A Practical Guide to Research Methods* (3rd ed., Vol. 222, pp. 248): Sage Publications Limited.

Clayton, N. S., Bussey, T. J., & Dickinson, A. (2003). Can Animals Recall the Past and Plan for the Future? *Nature Reviews Neuroscience, 4*(8), 685. doi:10.1038/nrn1180

Clayton, N. S., & Dickinson, A. (1998). Episodic-Like Memory During Cache Recovery by Scrub Jays. *Nature, 395*(6699), 272. doi:10.1038/26216

Constant, A., Ramstead, M. J., Veissière, S. P., & Friston, K. (2019). Regimes of Expectations: An Active Inference Model of Social Conformity and Human Decision Making. *Frontiers in Psychology, 10*, 679. doi:10.3389/fpsyg.2019.00679

Conway, M. (2022). Exploring the Links between Neuroscience and Foresight. *Journal of Futures Studies, 26*(4), 23-32.

Cook, C. N., Inayatullah, S., Burgman, M. A., Sutherland, W. J., & Wintle, B. A. (2014). Strategic Foresight: How Planning for the Unpredictable Can Improve Environmental Decision-Making. *Trends in Ecology & Evolution, 29*(9), 531-541. doi:10.1016/j.tree.2014.07.005

Corbin, J., & Strauss, A. (2015). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (4th ed.). California: Sage.

Costanzo, L. A., & MacKay, R. B. (2009). Introduction. In L. A. Costanzo & R. B. MacKay (Eds.), *Handbook of Research on Strategy and Foresight*. United Kingdom: Edward Elgar.

Coyne, K. P., Hall, S. J., & Clifford, P. G. (1997). Is Your Core Competence a Mirage? *The McKinsey Quarterly*(1), 40.

Craver, C. F., Kwan, D., Steindam, C., & Rosenbaum, R. S. (2014). Individuals with Episodic Amnesia Are Not Stuck in Time. *Neuropsychologia, 57*, 191-195. doi:10.1016/j.neuropsychologia.2014.03.004

Creswell, J. W. (2013a). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. California: Sage publications.

Creswell, J. W. (2013b). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California: Sage publications.

Cross, R., Ehrlich, K., Dawson, R., & Helferich, J. (2008). Managing Collaboration: Improving Team Effectiveness through a Network Perspective. *California Management Review, 50*(4), 74-98.

Crossan, M. M., Lane, H. W., & White, R. E. 1999. An organizational learning framework: From intuition to institution. *Academy of Management Review*, *24*(3): 522–537. Retrieved from https://www.proquest.com/scholarly-journals/organizational-learning-framework-intuition/docview/210978728/se-2

Cuhls, K. (2003). From Forecasting to Foresight Processes–New Participative Foresight Activities in Germany. *Journal of Forecasting, 22*(2‐3), 93-111. doi:10.1002/for.848

Cuhls, K. (2017). Mental Time Travel in Foresight Processes—Cases and Applications. *Futures, 86*, 118-135. doi:10.1016/j.futures.2016.05.008

Curnin, S., Brooks, B., & Brooks, O. (2022). Assessing the Influence of Individual Creativity, Perceptions of Group Decision-Making and Structured Techniques on the Quality of Scenario Planning. *Futures, 144*, 103057. doi:10.1016/j.futures.2022.103057

D'Argembeau, A., & Van der Linden, M. (2004). Phenomenal Characteristics Associated with Projecting Oneself Back into the Past and Forward into the Future: Influence of Valence and Temporal Distance. *Consciousness and Cognition, 13*(4), 844-858. doi:10.1016/j.concog.2004.07.007

Dane, E., & Pratt, M. G. (2007). Exploring Intuition and Its Role in Managerial Decision Making. *Academy of Management Review, 32*(1), 33-54. doi:10.5465/amr.2007.23463682

Dane, E., Rockmann, K. W., & Pratt, M. G. (2012). When Should I Trust My Gut? Linking Domain Expertise to Intuitive Decision-Making Effectiveness. *Organizational Behavior and Human Decision Processes, 119*(2), 187-194. doi:10.1016/j.obhdp.2012.07.009

Denzin, N., & Lincoln, Y. S. (2005). The Discipline and Practice of Qualitative Research. In N. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.). Thousand Oaks, California: Sage Publications, Inc.

Doe, R., Ndinguri, E., & Phipps, S. T. (2015). Emotional Intelligence: The Link to Success and Failure of Leadership. *Academy of Educational Leadership Journal, 19*(3), 105.

Donovan, S. J., Güss, C. D., & Naslund, D. (2015). Improving Dynamic Decision Making through Training and Self-Reflection. *Judgment and Decision Making, 10*(4), 284-295. doi:10.1017/S1930297500005118

Dörfler, V., & Ackermann, F. (2012). Understanding intuition: The case for two forms of intuition. Management Learning, 43(5): 545-564. Klein, G. 2008. Naturalistic decision making. *Human Factors*, *50*(3): 456-460. doi: 10.1177/1350507611434686

Eatough, V., & Smith, J. A. (2008). Interpretive Phenomenological Analysis. In C. Willig & W. Stainton-Rogers (Eds.), *The Sage Handbook of Qualitative Research in Psychology*. London: SAGE Publications Ltd.

Eatough, V., & Smith, J. A. (2017). Interpretative Phenomenological Analysis. In C. Willig & W. Stainton-Rogers (Eds.), *The Sage Handbook of Qualitative Research in Psychology* (pp. 193-211). United Kingdom: Sage.

Eisenhardt, K. M., & Santos, F. M. (2002). Knowledge-Based View: A New Theory of Strategy? In A. Pettigrew, H. Thomas, & R. Whittington (Eds.), *Handbook of Strategy and Management*. London, United Kingdom: SAGE Publications Ltd.

Elfenbein, H. A. (2023). Emotion in Organizations: Theory and Research. *Annual Review of Psychology, 74*, 489-517. doi:10.1146/annurev-psych-032720-035940

Elliott, R., Fischer, C. T., & Rennie, D. L. (1999). Evolving Guidelines for Publication of Qualitative Research Studies in Psychology and Related Fields. *British Journal of Clinical Psychology, 38*(3), 215-229. doi:10.1348/014466599162782

Endsley, M. R., & Garland, D. J. (2000a). *Situation Awareness Analysis and Measurement*. New Jersey: CRC press.

Endsley, M. R., & Garland, D. J. (2000b). Theoretical Underpinnings of Situation Awareness: A Critical Review. *Situation Awareness Analysis and Measurement, 1*(1), 3-21.

Faiz, S., Safdar, S., & Mubarak, N. (2022). Impact of Thriving at Work on Eustress and Distress: Career Growth as Mediator. *European Journal of Training and Development, 46*(1/2), 178-193. doi:10.1108/EJTD-08-2020-0130

Farnese, M. L., Barbieri, B., Chirumbolo, A., & Patriotta, G. (2019). Managing Knowledge in Organizations: A Nonaka's Seci Model Operationalization. *Frontiers in Psychology, 10*, 2730. doi:10.3389/fpsyg.2019.02730

Fast, N. J., Burris, E. R., & Bartel, C. A. (2014). Managing to Stay in the Dark: Managerial Self-Efficacy, Ego Defensiveness, and the Aversion to Employee Voice. *Academy of Management Journal, 57*(4), 1013-1034. doi:10.5465/amj.2012.0393

Fayol, H. (1949). *General and Industrial Management*. New York, NY: Pitman.

Ferguson, G. A. (1954). On Learning and Human Ability. *Canadian Journal of Psychology/Revue canadienne de psychologie, 8*(2), 95. doi:10.1037/h0083598

Fernandez, V., & Gallardo-Gallardo, E. (2021). Tackling the Hr Digitalization Challenge: Key Factors and Barriers to Hr Analytics Adoption. *Competitiveness Review: An International Business Journal, 31*(1), 162-187. doi:10.1108/CR-12-2019-0163

Fillion, G., Koffi, V., & Ekionea, J.-P. B. (2015). Peter Senge's Learning Organization: A Critical View and the Addition of Some New Concepts to Actualize Theory and Practice. *Journal of Organizational Culture, Communications and Conflict, 19*(3), 73.

Finlay, L. (2012). Debating Phenomenological Methods. In N. Friesen, C. Henriksson, & T. Saevi (Eds.), *Hermeneutic Phenomenology in Education* (pp. 17-37). The Netherlands: Sense Publishers.

Fisher, G., & Neubert, E. (2022). Evaluating ventures fast and slow: Sensemaking, intuition, and deliberation in entrepreneurial resource provision decisions. *Entrepreneurship Theory and Practice*. 47(4), 1298-1326. doi: 10422587221093291.

Flick, U. (2014). *An Introduction to Qualitative Research*. London: Sage.

Fontela, E., Guzman, J., Perez, M., & Santos, F.J. (2006). The art of entrepreneurial foresight. *Foresight, 8*(6): 3-13. doi: 10.1108/14636680610712496

Freeze, R. D., & Kulkarni, U. (2007). Knowledge Management Capability: Defining Knowledge Assets. *Journal of Knowledge Management, 11*(6), 94-109. doi:doi.org/10.1108/13673270710832190

Galan, N. (2023). Knowledge Loss Induced by Organizational Member Turnover: A Review of Empirical Literature, Synthesis and Future Research Directions (Part I). *The Learning Organization*. doi:10.1108/TLO-09-2022-0108

Ganguly, A., Talukdar, A., & Chatterjee, D. (2019). Evaluating the Role of Social Capital, Tacit Knowledge Sharing, Knowledge Quality and Reciprocity in Determining Innovation Capability of an Organization. *Journal of Knowledge Management*. doi:10.1108/JKM-03-2018-0190

Georghiou, L., & Keenan, M. (2006). Evaluation of National Foresight Activities: Assessing Rationale, Process and Impact. *Technological Forecasting and Social Change, 73*(7), 761-777. doi:10.1016/j.techfore.2005.08.003

Gephart, R. P., Topal, C., & Zhang, Z. (2010). Future-Oriented Sensemaking: Temporalities and Institutional Legitimation. In T. Hernes & S. Maitlis (Eds.), *Process, Sensemaking, and Organizing* (pp. 275-312). Oxford: Oxford University Press.

Giorgi, A. (1997). The Theory, Practice, and Evaluation of the Phenomenological Method as a Qualitative Research Procedure. *Journal of Phenomenological Psychology, 28*(2), 235-260. doi:10.1163/156916297X00103

Glaser, B. G. (1965). The Constant Comparative Method of Qualitative Analysis. *Social Problems, 12*(4), 436-445. doi:10.2307/798843

Goh, A. Y. S. (2019). Rethinking Reflective Practice in Professional Lifelong Learning Using Learning Metaphors. *Studies in Continuing Education, 41*(1), 1-16. doi:10.1080/0158037X.2018.1474867

Goleman, D., & Boyatzis, R. (2017). Emotional Intelligence Has 12 Elements. Which Do You Need to Work On. *Harvard Business Review, 84*(2), 1-5.

Graetz, F. (2002). Strategic Thinking Versus Strategic Planning: Towards Understanding the Complementarities. *Management Decision, 40*(5), 456-462. doi:10.1108/00251740210430434

Grant, R. M. (1996). Toward a Knowledge‐Based Theory of the Firm. *Strategic Management Journal, 17*(S2), 109-122. doi:10.1002/smj.4250171110

Graso, M., & Probst, T. M. (2012). The Effect of Consideration of Future Consequences on Quality and Quantity Aspects of Job Performance *Journal of Applied Social Psychology, 42*(6), 1335-1352. doi:10.1111/j.1559-1816.2012.00901.x

Guba, E. G., & Lincoln, Y. S. (2005). Paradigmatic Controversies, Contradictions, and Emerging Confluences. In N. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.). Thousand Oaks, California: Sage Publications, Inc.

Haesli, A., & Boxall, P. (2005). When Knowledge Management Meets Hr Strategy: An Exploration of Personalization-Retention and Codification-Recruitment Configurations. *The International Journal of Human Resource Management, 16*(11), 1955-1975. doi:10.1080/09585190500314680

Hafezi, R., Malekifar, S., & Akhavan, A. (2018). Analyzing Iran's Science and Technology Foresight Programs: Recommendations for Further Practices. *Foresight, 20*(3), 312-331. doi:10.1108/Fs-10-2017-0064

Hamel, G. (1994). The Concept of Core Competence. In G. Hamel & A. Heene (Eds.), *Competence-Based Competition*. Chichester, England: John Wiley & Sons.

Hargrove, M. B., Hargrove, D., & Becker, W. S. (2016). Managing Stress: Human Resource Management Interventions for Stress and Eustress. *Journal of Human Resources Education, 10*(2), 25-38.

Harvey, J.-F. (2022). Microfoundations of Sensing Capabilities: From Managerial Cognition to Team Behavior. *Strategic Organization*, 14761270221142959.

Harvey, J.-F., Bresman, H., Edmondson, A. C., & Pisano, G. P. (2022). A Strategic View of Team Learning in Organizations. *Academy of Management Annals, 16*(2), 476-507. doi:10.5465/annals.2020.0352

Helfat, C. E., & Peteraf, M. A. (2015). Managerial Cognitive Capabilities and the Microfoundations of Dynamic Capabilities. *Strategic Management Journal, 36*(6), 831-850. doi:10.1002/smj.2247

Herland, M. D. (2022). Emotional Intelligence as a Part of Critical Reflection in Social Work Practice and Research. *Qualitative Social Work, 21*(4), 662-678. doi:10.1177/14733250211024734

Hess, J. D., & Bacigalupo, A. C. (2011). Enhancing Decisions and Decision‐Making Processes through the Application of Emotional Intelligence Skills. *Management Decision*. doi:10.1108/00251741111130805

Hines, A., Gary, J., Daheim, C., & van der Laan, L. (2017). Building Foresight Capacity: Toward a Foresight Competency Model. *World Futures Review, 9*(3), 123-141. doi:doi.org/10.1177/1946756717715637

Hock-Doepgen, M., Clauss, T., Kraus, S., & Cheng, C.-F. (2021). Knowledge Management Capabilities and Organizational Risk-Taking for Business Model Innovation in Smes. *Journal of Business Research, 130*, 683-697.

Hodgkinson, G. P., & Clarke, I. (2007). Conceptual Note: Exploring the Cognitive Significance of Organizational Strategizing: A Dual-Process Framework and Research Agenda. *Human Relations, 60*(1), 243-255. doi:10.1177/0018726707075297

Hodgkinson, G. P., & Healey, M. P. (2011). Psychological Foundations of Dynamic Capabilities: Reflexion and Reflection in Strategic Management. *Strategic Management Journal, 32*(13), 1500-1516. doi:10.1002/smj.964

Hodgkinson, G. P., & Sadler-Smith, E. (2018). The Dynamics of Intuition and Analysis in Managerial and Organizational Decision Making. *Academy of Management Perspectives, 32*(4), 473-492. doi:10.5465/amp.2016.0140

Holstein, J. A., & Gubrium, J. F. (2008). Constructionist Impulses in Ethnographic Fieldwork. In J. A. Holstein & J. F. Gubrium (Eds.), *Handbook of Constructionist Research* (pp. 373-395). New York: The Guilford Press.

Horton, A. (1999). A Simple Guide to Successful Foresight. *Foresight, 1*(1), 5-9. doi:10.1108/14636689910802052

Høyrup, S. (2004). Reflection as a Core Process in Organisational Learning. *Journal of Workplace Learning*, *16* (8), 442-454. doi: 10.1108/13665620410566414

Hulaikah, M., Degeng, I., & Murwani, F. D. (2020). The Effect of Experiential Learning and Adversity Quotient on Problem Solving Ability. *International Journal of Instruction, 13*(1), 869-884.

Iden, J., Methlie, L. B., & Christensen, G. E. (2017). The Nature of Strategic Foresight Research: A Systematic Literature Review. *Technological Forecasting and Social Change, 116*, 87-97. doi:10.1016/j.techfore.2016.11.002

Ingvar, D. H. (1985). " Memory of the Future": An Essay on the Temporal Organization of Conscious Awareness. *Human Neurobiology, 4*(3), 127-136.

Israel, M., & Hay, I. (2006). *Research Ethics for Social Scientists*. California: Sage.

Istianingsih, N., Masnun, A., & Pratiwi, W. (2020). Managerial Performance Models through Decision Making and Emotional Intelligence in Public Sector. *Administratie si Management Public*(35), 153-166.

Joe, C., Yoong, P., & Patel, K. (2013). Knowledge Loss When Older Experts Leave Knowledge-Intensive Organisations. *Journal of Knowledge Management, 17*(6), 913-927. doi:10.1108/JKM-04-2013-0137

Joireman, J., Balliet, D., Sprott, D., Spangenberg, E., & Schultz, J. (2008). Consideration of Future Consequences, Ego-Depletion, and Self-Control: Support for Distinguishing between Cfc-Immediate and Cfc-Future Sub-Scales. *Personality and Individual Differences, 45*(1), 15-21. doi:10.1016/j.paid.2008.02.011

Jordi, R. (2011). Reframing the Concept of Reflection: Consciousness, Experiential Learning, and Reflective Learning Practices. *Adult education quarterly, 61*(2), 181-197.

Julmi, C. (2019). When Rational Decision-Making Becomes Irrational: A Critical Assessment and Re-Conceptualization of Intuition Effectiveness. *Business Research, 12*(1), 291-314. doi:10.1007/s40685-019-0096-4

Kahneman, D. and Frederick, S. (2002) Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich et al. (eds) *Heuristics and Biases: the Psychology of Intuitive Judgment*, pp. 49–81, United Kingdom: Cambridge University Press.

Kayes, D. C. (2002). Experiential Learning and Its Critics: Preserving the Role of Experience in Management Learning and Education. *Academy of Management Learning & Education, 1*(2), 137-149.

Kim, E., & Park, S. (2021). Employees' Perceptions of Organizational Learning: The Role of Knowledge and Trust. *Kybernetes, 50*(5), 1521-1538.

Klein, G. (1997a). Developing Expertise in Decision Making. *Thinking & Reasoning, 3*(4), 337-352.

Klein, G. (1997b). The recognition-primed decision (RPD) model: Looking back, looking forward. In C. E. Zsambok and G. Klein. (eds) *Naturalistic Decision Making,* 285-292. East Sussex: Lawrence Erlbaum Associates, Inc.

Klein, S. (2013). Making the Case That Episodic Recollection Is Attributable to Operations Occurring at Retrieval Rather Than to Content Stored in a Dedicated Subsystem of Long-Term Memory. *Frontiers in Behavioral Neuroscience, 7*, 3. doi:10.3389/fnbeh.2013.00003

Kliegel, M., McDaniel, M. A., & Einstein, G. O. (2000). Plan Formation, Retention, and Execution in Prospective Memory: A New Approach and Age-Related Effects. *Memory & Cognition, 28*(6), 1041-1049. doi:10.3758/bf03209352

Kneisel, E. (2020). Team Reflections, Team Mental Models and Team Performance over Time. *Team Performance Management: An International Journal*. doi:10.1108/TPM-09-2018-0061

Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2014). Experiential Learning Theory: Previous Research and New Directions *Perspectives on Thinking, Learning, and Cognitive Styles* (pp. 227-248): Routledge.

Kollmann, T., Stöckmann, C., Kensbock, J. M., & Peschl, A. (2020). What Satisfies Younger Versus Older Employees, and Why? An Aging Perspective on Equity Theory to Explain Interactive Effects of Employee Age, Monetary Rewards, and Task Contributions on Job Satisfaction. *Human Resource Management, 59*(1), 101-115.

Kozlowski, S. W. (2018). Enhancing the Effectiveness of Work Groups and Teams: A Reflection. *Perspectives on Psychological Science, 13*(2), 205-212. doi:10.1177/1745691617697078

Kump, B. (2022). No need to hide: Acknowledging the researcher's intuition in empirical organizational research. *Human Relations*, *75*(4): 635- 654. doi: 10.1177/0018726720984837

Lalot, F., Ahvenharju, S., & Minkkinen, M. (2021). Aware of the Future? Adaptation and Refinement of the Futures Consciousness Scale. *Psychological Test Adaptation and Development, 2*(1), 102-110. doi:10.1027/2698-1866/a000014

Lamberti, G., Aluja Banet, T., & Rialp Criado, J. (2022). Work Climate Drivers and Employee Heterogeneity. *The International Journal of Human Resource Management, 33*(3), 472-504. doi:10.1080/09585192.2020.1711798

Larkin, M., Eatough, V., & Osborn, M. (2011). Interpretative Phenomenological Analysis and Embodied, Active, Situated Cognition. *Theory & Psychology, 21*(3), 318-337. doi:10.1177/0959354310377544

Larkin, M., & Thompson, A. (2012). Interpretative Phenomenological Analysis. In D. Harper & A. R. Thompson (Eds.), *Qualitative Research Methods in Mental Health and Psychotherapy: A Guide for Students and Practitioners* (pp. 99-116). USA: Wiley-Blackwell.

Larkin, M., Watts, S., & Clifton, E. (2006). Giving Voice and Making Sense in Interpretative Phenomenological Analysis. *Qualitative Research in Psychology, 3*(2), 102-120.

Lauster, M., & Hansen-Casteel, S. (2018). On Some Fundamental Methodological Aspects in Foresight Processes. *European Journal of Futures Research, 6*(11), 1-8. doi:10.1186/s40309-018-0140-1

Li, H., Sajjad, N., Wang, Q., Muhammad Ali, A., Khaqan, Z., & Amina, S. (2019). Influence of Transformational Leadership on Employees' Innovative Work Behavior in Sustainable Organizations: Test of Mediation and Moderation Processes. *Sustainability, 11*(6), 1594.

Locke, E. A., & Latham, G. P. (2002). Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey. *American Psychologist, 57*(9), 705-717. doi:10.1037/0003-066X.57.9.705

Locke, E. A., & Latham, G. P. (2019). The Development of Goal Setting Theory: A Half Century Retrospective. *Motivation Science, 5*(2), 93. doi:10.1037/mot0000127

Lorinkova, N. M., Pearsall, M. J., & Sims Jr, H. P. (2013). Examining the Differential Longitudinal Performance of Directive Versus Empowering Leadership in Teams. *Academy of Management Journal, 56*(2), 573-596.

Lyons, A. D., Henry, J. D., Rendell, P. G., Corballis, M. C., & Suddendorf, T. (2014). Episodic Foresight and Aging. *Psychology and Aging, 29*(4), 873. doi:10.1037/a0038130

Major, E., Asch, D., & Cordey-Hayes, M. (2001). Foresight as a Core Competence. *Futures, 33*(2), 91-107. doi:10.1016/S0016-3287(00)00057-4

Major, E., & Cordey-Hayes, M. (2000). Knowledge Translation: A New Perspective on Knowledge Transfer and Foresight. *Foresight, 2*(4), 411-423. doi:10.1108/14636680010802762

Makarius, E. E., Mukherjee, D., Fox, J. D., & Fox, A. K. (2020). Rising with the Machines: A Sociotechnical Framework for Bringing Artificial Intelligence into the Organization. *Journal of Business Research, 120*, 262-273.

Martin-Ordas, G. (2018). "First, I Will Get the Marbles." Children's Foresight Abilities in a Modified Spoon Task. *Cognitive Development, 45*, 152-161. doi:10.1016/j.cogdev.2017.07.001

Martin-Ordas, G., Atance, C. M., & Caza, J. S. (2014). How Do Episodic and Semantic Memory Contribute to Episodic Foresight in Young Children? *Frontiers in Psychology, 5*, 732. doi:10.3389/fpsyg.2014.00732

Martin-Ordas, G., Atance, C. M., & Louw, A. (2012). The Role of Episodic and Semantic Memory in Episodic Foresight. *Learning and Motivation, 43*(4), 209-219. doi:10.1016/j.lmot.2012.05.011

Maurer, I., Bartsch, V., & Ebers, M. (2011). The Value of Intra-Organizational Social Capital: How It Fosters Knowledge Transfer, Innovation Performance, and Growth. *Organization Studies, 32*(2), 157-185.

Mazorodze, A. H., & Buckley, S. (2020). A Review of Knowledge Transfer Tools in Knowledge-Intensive Organisations. *South African Journal of Information Management, 22*(1), 1-6.

McCrae, R. R., & Greenberg, D. M. (2014). Openness to Experience. In D. K. Simonton (Ed.), *The Wiley Handbook of Genius* (pp. 222-243). USA: John Wiley & Sons.

Mercuri, K., Terrett, G., Henry, J. D., Curran, H. V., Elliott, M., & Rendell, P. G. (2018). Episodic Foresight Deficits in Regular, but Not Recreational, Cannabis Users. *Journal of Psychopharmacology, 32*(8), 876-882. doi:10.1177/0269881118776672

Minichiello, V., Aroni, R., & Hays, T. (2008). *In-Depth Interviewing* (3rd ed.). Sydney, Australia: Pearson Education Australia.

Mintzberg, H. (1994). The Fall and Rise of Strategic Planning. *Harvard Business Review, 72*(1), 107-114.

Mohammed, N., & Kamalanabhan, T. (2020). Interpersonal Trust and Employee Knowledge Sharing Behavior: Creative Performance as the Outcome. *VINE Journal of Information and Knowledge Management Systems, 50*(1), 94-116.

Moon, J. (2021). Effect of Emotional Intelligence and Leadership Styles on Risk Intelligent Decision Making and Risk Management. *Journal of Engineering, Project & Production Management, 11*(1), 71-81. doi:10.2478/jeppm-2021-0008

Morgan, G., & Smircich, L. (1980). The Case for Qualitative Research. *Academy of Management Review, 5*(4), 491-500. doi:10.5465/amr.1980.4288947

Morse, J. (1994). Designing Funded Qualitative Research. In N. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, California: SAGE Publications, Inc.

Murphy, C. M., Christakou, A., Giampietro, V., Brammer, M., Daly, E. M., Ecker, C., . . . Consortium, M. A. (2017). Abnormal Functional Activation and Maturation of Ventromedial Prefrontal Cortex and Cerebellum During Temporal Discounting in Autism Spectrum Disorder. *Human Brain Mapping, 38*(11), 5343-5355. doi:10.1002/hbm.23718

Muyia, H. M. (2009). Approaches to and Instruments for Measuring Emotional Intelligence: A Review of Selected Literature. *Advances in Developing Human Resources, 11*(6), 690-702. doi:10.1177/1523422309360843

Myers, C. G. (2021). Performance Benefits of Reciprocal Vicarious Learning in Teams. *Academy of Management Journal, 64*(3), 926-947. doi:10.5465/amj.2018.0875

Myers, C. G. (2022). Storytelling as a Tool for Vicarious Learning among Air Medical Transport Crews. *Administrative Science Quarterly, 67*(2), 378-422. doi:10.1177/00018392211058426

Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review, 23*(2), 242-266.

Nankervis, A. R., Baird, M., Coffey, J., & Shields, J. (2014). *Human Resource Management : Strategy and Practice* (8th ed.). South Melbourne, Victoria, Australia: Cengage Learning.

Nelson, T. O., & Narens, L. (1994). Why Investigate Metacognition? In J. Metcalfe & A. P. Shimamura (Eds.), *Metacognition: Knowing About Knowing.* Cambridge, Massachusetts, USA: The MIT Press.

Neuman, W. L. (1997). *Social Research Methods: Qualitative and Quantitative Approaches* (3rd ed.). Massachusetts: Allyn and Bacon.

Neuman, W. L. (2007). *Basics of Social Research: Qualitative and Quantitative Approaches*. Boston, USA: Pearson Education, Inc.

Neves, P., & Eisenberger, R. (2014). Perceived Organizational Support and Risk Taking. *Journal of Managerial Psychology, 29*(2), 187-205.

Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science, 5*(1), 14-37. doi:10.1287/orsc.5.1.14

Nonino, F. (2013). The Network Dimensions of Intra-Organizational Social Capital. *Journal of Management & Organization, 19*(4), 454-477.

O'Brien, E., & Robertson, P. (2009). Future Leadership Competencies: From Foresight to Current Practice. *Journal of European Industrial Training, 33*(4), 371-380. doi:10.1108/03090590910959317

Obrenovic, B., Du, J., Godinić, D., & Tsoy, D. (2022). Personality Trait of Conscientiousness Impact on Tacit Knowledge Sharing: The Mediating Effect of Eagerness and Subjective Norm. *Journal of Knowledge Management, 26*(5), 1124-1163. doi:10.1108/JKM-01-2021-0066

Ogbonnaya, C. (2019). Exploring Possible Trade‐Offs between Organisational Performance and Employee Well‐Being: The Role of Teamwork Practices. *Human Resource Management Journal, 29*(3), 451-468. doi:10.1111/1748-8583.12238

Okoli, J. (2021). Improving Decision-Making Effectiveness in Crisis Situations: Developing Intuitive Expertise at the Workplace. *Development and Learning in Organizations: An International Journal, 35*(4), 18-20. doi:10.1108/DLO-08-2020-0169

Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in Qualitative Research. *Journal of Nursing Scholarship, 33*(1), 93-96. doi:10.1111/j.1547-5069.2001.00093.x

Osvath, M., & Osvath, H. (2008). Chimpanzee (Pan Troglodytes) and Orangutan (Pongo Abelii) Forethought: Self-Control and Pre-Experience in the Face of Future Tool Use. *Animal Cognition, 11*(4), 661-674. doi:10.1007/s10071-008-0157-0

Oxford University Press. (2018). English Oxford Living Dictionaries. Retrieved from https://en.oxforddictionaries.com/definition/foresight

Pannu, J. K., & Kaszniak, A. W. (2005). Metamemory Experiments in Neurological Populations: A Review. *Neuropsychology Review, 15*(3), 105-130. doi:10.1007/s11065-005-7091-6

Perry, L., Shrestha, M. D., Vose, M. D., & Gavrilets, S. (2018). Collective Action Problem in Heterogeneous Groups with Punishment and Foresight. *Journal of Statistical Physics, 172*(1), 293-312. doi:10.1007/s10955-018-2012-2

Peter, M. K., & Jarratt, D. G. (2015). The Practice of Foresight in Long-Term Planning. *Technological Forecasting and Social Change, 101*, 49-61. doi:10.1016/j.techfore.2013.12.004

Phillips-Wren, G., & Adya, M. (2020). Decision Making under Stress: The Role of Information Overload, Time Pressure, Complexity, and Uncertainty. *Journal of Decision Systems, 29*(sup1), 213-225.

Pietkiewicz, I., & Smith, J. A. (2014). A Practical Guide to Using Interpretative Phenomenological Analysis in Qualitative Research Psychology. *Psychological Journal, 20*(1), 7-14. doi:10.14691/CPPJ.20.1.7

Popper, R. (2008). How Are Foresight Methods Selected? *Foresight, 10*(6), 62-89. doi:10.1108/14636680810918586

Portaleoni, C. G., Marinova, S., Ul-Haq, R., & Marinov, M. (2013). *Corporate Foresight and Strategic Decisions: Lessons from a European Bank*. United Kingdom: Palgrave Macmillan.

Prahalad, C. K., & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review, 68*(3), 79-91.

Prince, R., & Rao, M. (2022). Efficacy Beliefs and Employee Voice: The Role of Perceived Influence and Manager Openness. *International Journal of Productivity and Performance Management, 71*(8), 3331-3347. doi:10.1108/IJPPM-05-2020-0266

Probst, T. M., Graso, M., Estrada, A. X., & Greer, S. (2013). Consideration of Future Safety Consequences: A New Predictor of Employee Safety. *Accident Analysis & Prevention, 55*, 124-134. doi:10.1016/j.aap.2013.02.023

Rajaram, S. (1993). Remembering and Knowing: Two Means of Access to the Personal Past. *Memory & Cognition, 21*(1), 89-102. doi:10.3758/bf03211168

Ramírez, R., & Wilkinson, A. (2016). Strategic reframing: The Oxford scenario planning approach, United Kingdom: Oxford University Press.

Ravitch, S. M., & Carl, N. M. (2021). *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological* (Second ed.). Thousand Oaks, California: SAGE Publications, Inc.

Rennie, D. L. (2000). Grounded Theory Methodology as Methodical Hermeneutics: Reconciling Realism and Relativism. *Theory & Psychology, 10*(4), 481-502. doi:10.1177/0959354300104003

Rhemann, M. (2019). Deepening Futures with Neuroscience. *World Futures Review, 11*(1), 51-68. doi:10.1177/1946756718785908

Richardson, J. T. (1999). The Concepts and Methods of Phenomenographic Research. *Review of Educational Research, 69*(1), 53-82. doi:Doi 10.3102/00346543069001053

Robbins, S., DeCenzo, D., Coulter, M., & Woods, M. (2022). *Management: The Essentials* (5th ed.). Melbourne, Australia: Pearson Australia.

Rohrbeck, R., Battistella, C., & Huizingh, E. (2015). Corporate Foresight: An Emerging Field with a Rich Tradition. *Technological Forecasting and Social Change, 101*, 1-9. doi:10.1016/j.techfore.2015.11.002

Rohrbeck, R., & Schwarz, J. O. (2013). The Value Contribution of Strategic Foresight: Insights from an Empirical Study of Large European Companies. *Technological Forecasting and Social Change, 80*(8), 1593-1606. doi:10.1016/j.techfore.2013.01.004

Sadler-Smith, E. (2008). The Role of Intuition in Collective Learning and the Development of Shared Meaning. *Advances in Developing Human Resources, 10*(4), 494-508.

Saldana, J. (2012). *The Coding Manual for Qualitative Researchers*. London, United Kingdom: SAGE Publications Ltd.

Sandberg, J., & Tsoukas, H. (2020). Sensemaking Reconsidered: Towards a Broader Understanding through Phenomenology. *Organization Theory, 1*(1), 1-34. doi:10.1177/2631787719879937

Sarpong, D., & Hartman, D. (2018). Fading Memories of the Future: The Dissipation of Strategic Foresight among Middle Managers. *Technology Analysis & Strategic Management, 30*(6), 672-683. doi:10.1080/09537325.2017.1376736

Schacter, D. L., Addis, D. R., & Buckner, R. L. (2007). Remembering the Past to Imagine the Future: The Prospective Brain. *Nature Reviews Neuroscience, 8*(9), 657-661. doi:10.1038/nrn2213

Schacter, D. L., Benoit, R. G., & Szpunar, K. K. (2017). Episodic Future Thinking: Mechanisms and Functions. *Current Opinion in Behavioral Sciences, 17*, 41-50. doi:10.1016/j.cobeha.2017.06.002

Scheier, M. F., & Carver, C. S. (1985). Optimism, Coping, and Health: Assessment and Implications of Generalized Outcome Expectancies. *Health Psychology, 4*(3), 219-247. doi:10.1037//0278-6133.4.3.219

Schippers, M. C., Den Hartog, D. N., Koopman, P. L., & Van Knippenberg, D. (2008). The Role of Transformational Leadership in Enhancing Team Reflexivity. *Human Relations, 61*(11), 1593-1616. doi:10.1177/0018726708096639

Schmutz, J. B., Lei, Z., Eppich, W. J., & Manser, T. (2018). Reflection in the Heat of the Moment: The Role of in‐Action Team Reflexivity in Health Care Emergency Teams. *Journal of Organizational Behavior, 39*(6), 749-765. doi:10.1002/job.2299

Schon, D. A. (1991). *The Reflective Practitioner : How Professionals Think in Action* (New Edition ed.). Aldershot, England: Arena.

Senge, P. M. (1992). Mental Models. *Planning Review, 20*(2), 4-44. doi:10.1108/eb054349

Senge, P. M. (1994). *The Fifth Discipline Fieldbook : Strategies and Tools for Building a Learning Organization*. London: London : Nicholas Brealey.

Serenko, A. (2022). The Great Resignation: The Great Knowledge Exodus or the Onset of the Great Knowledge Revolution? *Journal of Knowledge Management*(ahead-of-print).

Serenko, A., & Bontis, N. (2016). Understanding Counterproductive Knowledge Behavior: Antecedents and Consequences of Intra-Organizational Knowledge Hiding. *Journal of Knowledge Management*.

Shaw, R., & Frost, N. (2015). Breaking out of the Silo Mentality. *Psychologist, 28*(8), 638-641.

Sherry, D. F., & Schacter, D. L. (1987). The Evolution of Multiple Memory Systems. *Psychological Review, 94*(4), 439-454. doi:10.1037/0033-295x.94.4.439

Shipp, A. J., Edwards, J. R., & Lambert, L. S. (2009). Conceptualization and Measurement of Temporal Focus: The Subjective Experience of the Past, Present, and Future. *Organizational Behavior and Human Decision Processes, 110*(1), 1-22. doi:10.1016/j.obhdp.2009.05.001

Shteynberg, G., & Apfelbaum, E. P. (2013). The Power of Shared Experience: Simultaneous Observation with Similar Others Facilitates Social Learning. *Social Psychological and Personality Science, 4*(6), 738-744.

Sinclair, M. (2010). Misconceptions About Intuition. *Psychological Inquiry, 21*(4), 378-386.

Sinclair, M., Sadler-Smith, E., & Hodgkinson, G. P. (2009). The Role of Intuition in Strategic Decision Making *Handbook of Research on Strategy and Foresight*: Edward Elgar Publishing.

Slaughter, R. (1995). *The Foresight Principle: Cultural Recovery in the 21st Century*: Praeger Publishers.

Slaughter, R. (1997). Developing and Applying Strategic Foresight. *ABN Report, 5*(10), 13-27.

Smith, E. A. (2001). The Role of Tacit and Explicit Knowledge in the Workplace. *Journal of Knowledge Management, 5*(4), 311-321. doi:10.1108/13673270110411733

Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis : Theory, Method and Research*. London: Sage.

Smith, J., & Osborn, M. (2004). Interpretative Phenomenological Analysis. In G. Breakwell (Ed.), *Doing Social Psychology Research* (pp. 229-254). Oxford, UK: The British Psychological Society and Blackwell Publishing Ltd.

Smith, J., & Shinebourne, P. (2012). *Interpretative Phenomenological Analysis*: American Psychological Association.

Spinelli, E. (2005). *The Interpreted World : An Introduction to Phenomenological Psychology* (2nd ed.). London: SAGE Publications Ltd.

Spraggon, M., & Bodolica, V. (2017). Collective Tacit Knowledge Generation through Play: Integrating Socially Distributed Cognition and Transactive Memory Systems. *Management Decision, 55*(1), 119-135. doi:10.1108/Md-05-2015-0173

Starks, H., & Brown Trinidad, S. (2007). Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research, 17*(10), 1372-1380. doi:10.1177/1049732307307031

Steinberg, L., Graham, S., O'Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009). Age Differences in Future Orientation and Delay Discounting. *Child Development, 80*(1), 28-44. doi:10.1111/j.1467-8624.2008.01244.x

Stoltz, P. G. (2000). Adversity Quotient. *Jakarta: Grasindo*.

Strathman, A., Gleicher, F., Boninger, D. S., & Edwards, C. S. (1994). The Consideration of Future Consequences: Weighing Immediate and Distant Outcomes of Behavior. *Journal of Personality and Social Psychology, 66*(4), 742-752. doi:10.1037/0022-3514.66.4.742

Suddendorf, T. (2006). Foresight and Evolution of the Human Mind. *Science, 312*(5776), 1006-1007. doi:10.1126/science.1129217

Suddendorf, T. (2017). The Emergence of Episodic Foresight and Its Consequences. *Child Development Perspectives, 11*(3), 191-195. doi:10.1111/cdep.12233

Suddendorf, T., Addis, D., & Corballis, M. (2009). Mental Time Travel and the Shaping of the Human Mind. *Philosophical Transactions of the Royal Society of London B: Biological Sciences, 364*, 1317-1324. doi:10.1098/rstb.2008.0301

Suddendorf, T., Bulley, A., & Miloyan, B. (2018). Prospection and Natural Selection. *Current Opinion in Behavioral Sciences, 24*, 26-31. doi:10.1016/j.cobeha.2018.01.019

Suddendorf, T., & Busby, J. (2003). Mental Time Travel in Animals? *Trends in Cognitive Sciences, 7*(9), 391-396. doi:10.1016/s1364-6613(03)00187-6

Suddendorf, T., & Busby, J. (2005). Making Decisions with the Future in Mind: Developmental and Comparative Identification of Mental Time Travel. *Learning and Motivation, 36*(2), 110-125. doi:10.1016/j.lmot.2005.02.010

Suddendorf, T., & Corballis, M. (1997). Mental Time Travel and the Evolution of the Human Mind. *Genetic, Social & General Psychology Monographs, 123*(2), 133-168.

Suddendorf, T., & Corballis, M. (2007). The Evolution of Foresight: What Is Mental Time Travel, and Is It Unique to Humans? *Behavioral and Brain Sciences, 30*(03), 299-313. doi:10.1017/S0140525X07001975

Suddendorf, T., & Moore, C. (2011). Introduction to the Special Issue: The Development of Episodic Foresight. *Cognitive Development, 26*(4), 295-298. doi:10.1016/j.cogdev.2011.09.001

Suddendorf, T., Nielsen, M., & Von Gehlen, R. (2011). Children's Capacity to Remember a Novel Problem and to Secure Its Future Solution. *Developmental Science, 14*(1), 26-33. doi:10.1111/j.1467-7687.2010.00950.x

Sulich, A., Sołoducho-Pelc, L., & Ferasso, M. (2021). Management Styles and Decision-Making: Pro-Ecological Strategy Approach. *Sustainability, 13*(4), 1604. doi:10.3390/su13041604

Szczepańska-Woszczyna, K. (2015). Leadership and Organizational Culture as the Normative Influence of Top Management on Employee's Behaviour in the Innovation Process. *Procedia Economics and Finance, 34*, 396-402. doi:10.1016/S2212-5671(15)01646-9

Szpunar, K. K., Spreng, R. N., & Schacter, D. L. (2014). A Taxonomy of Prospection: Introducing an Organizational Framework for Future-Oriented Cognition. *Proceedings of the National Academy of Sciences, 111*(52), 18414-18421. doi:10.1073/pnas.1417144111

Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do Team and Individual Debriefs Enhance Performance? A Meta-Analysis. *Human Factors, 55*(1), 231-245. doi:10.1177/0018720812448394

Tapinos, E., & Pyper, N. (2018). Forward Looking Analysis: Investigating How Individuals 'Do' Foresight and Make Sense of the Future. *Technological Forecasting and Social Change, 126*, 292-302. doi:10.1016/j.techfore.2017.04.025

Teece, D. (2007). Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance. *Strategic Management Journal, 28*(13), 1319-1350. doi:10.1002/smj.640

Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. *California Management Review, 58*(4), 13-35. doi:10.1525/cmr.2016.58.4.13

Tolbert, P. S., & Darabi, T. (2019). Bases of Conformity and Institutional Theory: Understanding Organizational Decision-Making *Microfoundations of Institutions* (Vol. 65, pp. 269-290): Emerald Publishing Limited.

Tripathy, M. (2018). Building Quality Teamwork to Achieve Excellence in Business Organizations. *International Research Journal of Management, IT and Social Sciences, 5*(3), 1-7. doi:10.21744/irjmis.v5i3.662

Tsai, W., & Ghoshal, S. (1998). Social Capital and Value Creation: The Role of Intrafirm Networks. *Academy of Management Journal, 41*(4), 464-476.

Tsoukas, H., & Shepherd, J. (2004). Introduction: Organizations and the Future, from Forecasting to Foresight. In H. Tsoukas & J. Shepherd (Eds.), *Managing the Future: Foresight in the Knowledge Economy.* USA: Blackwell Publishing.

Tulving, E. (1972). Episodic and Semantic Memory. In E. Tulving & W. Donaldson (Eds.), *Organization of Memory*. Oxford, England: Academic Press.

Tulving, E. (1984). Precis of Elements of Episodic Memory. *Behavioral and Brain Sciences, 7*(2), 223-238. doi:10.1017/S0140525x0004440x

Tulving, E. (1985a). *Elements of Episodic Memory*. Oxford, United Kingdom: Oxford University Press.

Tulving, E. (1985b). Memory and Consciousness. *Canadian Psychology/Psychologie Canadienne, 26*(1), 1. doi:10.1037/h0080017

Tulving, E. (2001). The Origin of Autonoesis in Episodic Memory. In H. L. Roediger & A. M. Surprenant (Eds.), *The Nature of Remembering: Essays in Honor of Robert G. Crowder* (pp. 17-34): American Psychological Association.

Turner, D., & Crawford, M. (1994). Managing Current and Future Competitive Performance: The Role of Competence. In G. Hamel & A. Heene (Eds.), *Competence-Based Competition*. Chichester, England: John Wiley & Sons Ltd.

Urbick, B. (2012). Hindsight, Insight and Foresight. *Young Consumers, 13*(1). doi:10.1108/yc.2012.32113aaa.002

van Manen, M. (1990). *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy* (2nd ed.). United kingdom: Routledge.

van Woerkom, M., & Croon, M. (2008). Operationalising Critically Reflective Work Behaviour. *Personnel Review, 37*(3), 317-331.

Von Krogh, G., Nonaka, I., & Rechsteiner, L. (2012). Leadership in Organizational Knowledge Creation: A Review and Framework. *Journal of management studies, 49*(1), 240-277.

Von Solms, R., & Von Solms, B. (2004). From Policies to Culture. *Computers & Security, 23*(4), 275-279. doi:10.1016/j.cose.2004.01.013

Voros, J. (2003). A Generic Foresight Process Framework. *Foresight, 5*(3), 10-21. doi:10.1108/14636680310698379

Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). An Affordance Perspective of Team Collaboration and Enforced Working from Home During Covid-19. *European Journal of Information Systems, 29*(4), 429-442. doi:10.1080/0960085X.2020.1800417

Wang, Z., Sun, C., & Cai, S. (2021). How Exploitative Leadership Influences Employee Innovative Behavior: The Mediating Role of Relational Attachment and Moderating Role of High-Performance Work Systems. *Leadership & Organization Development Journal, 42*(2), 233-248. doi:10.1108/LODJ-05-2020-0203

Wawersik, D., & Palaganas, J. (2022). Organizational Factors That Promote Error Reporting in Healthcare: A Scoping Review. *Journal of Healthcare Management, 67*(4), 283-301. doi:0.1097/JHM-D-21-00166

Weick, K. (2001). *Making Sense of the Organization*. Oxford, United Kingdom: Blackwell Publishers Ltd.

Weick, K., Sutcliffe, K., & Obstfeld, D. (2005). Organizing and the Process of Sensemaking. *Organization Science, 16*(4), 409-421. doi:10.1287/orsc.1050.0133

Wenzel, M., Danner-Schröder, A., & Spee, A. P. (2021). Dynamic Capabilities? Unleashing Their Dynamics through a Practice Perspective on Organizational Routines. *Journal of Management Inquiry, 30*(4), 395-406. doi:10.1177/1056492620916549

Wheeler, M. A., Stuss, D. T., & Tulving, E. (1997). Toward a Theory of Episodic Memory: The Frontal Lobes and Autonoetic Consciousness. *Psychological Bulletin, 121*(3), 331-354. doi:10.1037/0033-2909.121.3.331

Whelan, E., & Carcary, M. (2011). Integrating Talent and Knowledge Management: Where Are the Benefits? *Journal of Knowledge Management*. doi:10.1108/13673271111152018

Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human Resources and the Resource Based View of the Firm. *Journal of Management, 27*(6), 701-721. doi:10.1177/014920630102700607

Yardley, L. (2000). Dilemmas in Qualitative Health Research. *Psychology and Health, 15*(2), 215-228. doi:Doi 10.1080/08870440008400302

Yardley, S., Teunissen, P. W., & Dornan, T. (2012). Experiential Learning: Transforming Theory into Practice. *Medical teacher, 34*(2), 161-164.

Yen, Y.-F., Tseng, J.-F., & Wang, H.-K. (2015). The Effect of Internal Social Capital on Knowledge Sharing. *Knowledge Management Research & Practice, 13*, 214-224.

Yin, R. K. (2013). Validity and Generalization in Future Case Study Evaluations. *Evaluation, 19*(3), 321-332. doi:10.1177/1356389013497081

Yuryna Connolly, L., Lang, M., Gathegi, J., & Tygar, D. J. (2017). Organisational Culture, Procedural Countermeasures, and Employee Security Behaviour: A Qualitative Study. *Information & Computer Security, 25*(2), 118-136. doi:10.1108/ICS-03-2017-0013

Zheng, S., Zhang, W., & Du, J. (2011). Knowledge‐Based Dynamic Capabilities and Innovation in Networked Environments. *Journal of Knowledge Management*.

Zhu, H., Khan, M. K., Nazeer, S., Li, L., Fu, Q., Badulescu, D., & Badulescu, A. (2022). Employee Voice: A Mechanism to Harness Employees' Potential for Sustainable Success. *International Journal of Environmental Research and Public Health, 19*(2), 921. doi:10.3390/ijerph19020921

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Methods* (9th ed.). USA: Cengage Learning.

Appendices

Appendix 1 - Ethics Approval Letter

USC AUSTRALIA

25 July 2019

A/Prof Andrew Crowden
Chair, Human Research Ethics Committee
Tel: +61 7 5430 2823
Email: humanethics@usc.edu.au

Prof Karen Becker
Dr Wayne Anthony Graham
Mrs Melissa Innes

Dear Researchers

Expedited ethics approval for research project: Exploring the lived experience of individual foresight in organisations (S191343)

This letter is to confirm that on 9 July 2019, following review of the ethics application for the above named project, the Chair of the USC Human Research Ethics Committee (HREC) granted expedited ethics approval, subject to specific conditions that have now been satisfied.

The period of ethics approval is from 25 July 2019 to 25 July 2021. The standard conditions of approval are listed overleaf.

The ethics approval number for the project is S191343. This number should be quoted in your Research Project Information Sheet and in any written communication with participants.

The USC HREC will review this approval at its next meeting and should there be any variation of the conditions of approval, you will be informed.

If you have any queries or if you require further information, please contact us using the details above.

Yours sincerely

A/Prof Andrew Crowden
Chair, Human Research Ethics Committee

Research Project Information Sheet

USC
AUSTRALIA

Exploring the lived experience of individual foresight in organisations (Phase Two)

Ethics Approval Number: **S191343**

Research Team Contact Details

The research team consists of Student Investigator, Ms Melissa Innes (University of the Sunshine Coast), Chief Investigator Professor Karen Becker (University of the Sunshine Coast), Co-Investigator Dr Wayne Graham (University of the Sunshine Coast). Please direct questions to:

Student Investigator	**Chief Investigator**	**Co-Investigator**
Ms Melissa Innes	Prof Karen Becker	Dr Wayne Graham
Email: minnes1@usc.edu.au	Email: kbecker@usc.edu.au	Email: wgraham@usc.edu.au
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Project Description

The purpose of this research project is to investigate individual foresight in organisations; to help determine how valuable and prevalent individual foresight ability is amongst employees, and whether it can be developed in other individuals.

You have been invited to participate in this research project because your job position in your organisation has been identified as one in which individual foresight may play a role.

Participation

If you agree to participate in this research project, you will be asked to complete a one-on-one interview that will take approximately 60 minutes of your time.

In addition (and following your initial agreement to participate in this interview) the researcher would like you to complete a short 3-minute, 12-item questionnaire, to help understand your tendency to think about the future. **Prior to completing this questionnaire, the researcher will wait to receive your signed and returned consent form** to participate in the research.

During your interview, the interviewer will ask questions such as: 'Tell me about a time in your working life when you feel you were required to draw on a past experience to do your job?'; 'What was that like?'; 'How did that feel?'; 'Can you describe the thought process you went through?'.

You will receive an email several days prior to your interview to provide you with an explanation of Individual Foresight and some guidance around the types of situations we would like you to recall in the interview. The aim is to encourage you to think of a few examples from your own working life where Individual Foresight may have played a role. At this time, you will also be requested to complete the short questionnaire, which will be included as a link in your email.

The interview will take place in a private setting that is most suitable for you, at a time and date that is most convenient for you. The interview will be audio recorded (please refer to *Privacy, Confidentiality and Results* for more information). If you do not wish to be audio recorded, it is not possible to take part in the research.

Your participation in this research project is completely voluntary. If you do not wish to take part, you are not required to. If you decide to take part and later change your mind, you are free to withdraw at any point up until the interviews have been analysed (approximately three weeks after your interview). If you do wish to withdraw from this research project, please contact the Student Investigator Ms Melissa Innes (contact details at the top of this form).

Your decision to participate (or not), will in no way impact your current or future relationship with the University of the Sunshine Coast or the organisation in which you work.

Consent

You will be asked to provide written consent before participating in the research by signing the attached *Consent to Participate in Research* form. Consent is for the use of re-identifiable data in this research project and publications as well as use of de-identified data in future related research projects and publications, which may include other researchers.

Risks and Benefits

There are no anticipated risks beyond normal day-to-day living associated with your participation in this project, however, sometimes recalling past experiences can create some discomfort or distress. If this occurs, you may wish to consider consulting either your General Practitioner (GP) or contacting your Employee Assistance Program (EAP), or other supports available through your workplace.

It is not anticipated that this research project will directly benefit you, however, your involvement might give you insights into how foresight could be used in your work role.

Privacy, Confidentiality and Results

Data gathered throughout the study will be kept confidential at all times and only the research team and transcriber will have access to the recording and the transcript. The audio recording will be destroyed at the end of the research project. No published findings will reveal the identity of any participant. If you indicate that you would like to receive a copy of the transcription, it will be sent to you after the interview and you will have two weeks to review. Any data collected as a part of this research project will be stored securely as per USC's Research Data Management policy. All comments and responses will be treated confidentially unless required by law.

The results of this research project may be presented at external or internal conferences or meetings, or by publication. A summary of the findings may be presented to your organisation, but the information provided will not allow for identification of any participant. If you would like a summary of findings of this research project, please contact the Student Investigator (listed above).

Concerns or Complaints

If you have any concerns or complaints about the way this research project is being conducted, you can raise them with the Student Investigator (listed above). If you prefer an independent person, contact the Chairperson of the USC Human Research Ethics Committee: (c/- Office of Research, University of the Sunshine Coast, Maroochydore DC 4558; telephone (07) 5430 2823; email humanethics@usc.edu.au).

Thank you for your consideration of this study. Please keep this sheet for your information.

Appendix 3 - Phase One Interview Protocol

Pre-Interview

- Welcome participant and provide introduction to the research project / process.
- Check comprehension of the RPIS – focussing on the risks and strategies associated with participation.
- Check for consent form sign-off.
- Reflect on the email sent to the participant prior to the interview and establish the level of the participant's preparation for the interview.
- Remind participant that the interview format will be more like a story-telling opportunity than a formal business interview
- Remind the participant that the interview will be recorded.

Interview Questions

1. In your preparation for the interview, you have been thinking about a scenario you have observed in a work situation. Please tell me about that scenario and your observations of employees undertaking work during that scenario? (What happened? Who was involved? Why significant? Feelings? Why? Complexity of task/s? Decisions made? Past experience relevant? Impact on task?)

2. Beyond the scenario now, as an HR professional, which roles might you describe where you think foresight has been more necessary / prevalent than others? (Task complexity? Potential outcomes? IFS influence? Impact on decision-making? What level of organisation? Type of job/s? Examples. Important? Why?)

3. In your dealings with employees, you may have noticed some employees reflect on their past experience as useful to a scenario / task they're undertaking / have undertaken – or even imagine themselves in the future. How did this reflection by employees assist with accomplishing the task? (Useful? Did you encourage? Is this important? Why?)

4. As a HRM professional, you may choose to consider IFS ability in your planning of recruitment, selection, training or development strategies for employees. How might your organisation incorporate IFS ability into your current activities? (How? Which activities? If not already, would you? Why? Do you think IFS can be developed in individuals? Why/Why not?)

Additional Notes: During the interview it is important to show comprehension of a shared horizon with the participant (double hermeneutics / the hermeneutic circle) through simple gestures such as 'Oh right', 'yes, I see', 'Mmmm, Yes I see what you're saying', 'Yes, I understand'.

Appendix 4 - Phase Two Interview Protocol

Pre-Interview

- Welcome participant and provide introduction to the research project / process.
- Check comprehension of the RPIS – focussing on the risks and strategies associated with participation.
- Check for consent form sign-off.
- Reflect on the email sent to the participant prior to the interview and establish the level of the participant's preparation for the interview.
- Remind participant that the interview format will be more like a story-telling opportunity than a formal business interview
- Remind the participant that the interview will be recorded.

Interview Questions

1. In your preparation for the interview, you have been thinking about a scenario at work. Can you tell me about that scenario and your experience in undertaking work during that scenario? (What happened? Why significant? Thinking about? Why important? Feelings? Why? Complexity i.e. stressful/complicated/routine? Decision-making? Past experience relevant? Impact on task?)

2. You mentioned referring to past experience/s to assist you during that scenario? Can you describe to me what you were thinking about in the recent scenario, and how that thought process came about? How long/Time thinking? Detail recollected? YOUR direct experience or others? Impact on task (confidence)? Make a difference to outcome? Feelings? Why?

3. When you were undertaking work during that scenario, at any time did you picture yourself doing that work in a certain way – in the future? For example, 'imagining' outcomes / consequences based on your actions. (Picture yourself? Feelings? Predictions? Alternatives? Effect on feelings? Better / different outcome as result?)

4. How do you interpret the impact of your actions / decision-making on the scenario...positively or negatively? (Outcome important to you? Why? Feelings?)

5. What value do you place on the process of reflecting on past experiences to help make decisions about work? Is this something you'd like to do in the future? (Why? Why not?)

Additional Notes: During the interview it is important to show comprehension of a shared horizon with the participant (double hermeneutics / the hermeneutic circle) through simple gestures such as 'Oh right', 'yes, I see', 'Mmmm, Yes I see what you're saying', 'Yes, I understand'.

Appendix 5 - Phase One Interview Preparation

Dear [insert participant's name],

Thank you for agreeing to participate in my research project *'Exploring the lived experience of individual foresight in organisations'*. Foresight is a commonly used term, and most of us understand that it involves some sort of ability to think about the future and predict the impact of our current actions on that future. There seems to be a common understanding that having foresight enables us to make better decisions about our actions.

To prepare for the interview, please read through the following information, specifically to:

1.   Understand the definition of individual foresight (for the purposes of this project)

2.   Determine 1 or 2 work examples of significant events / incidents/ tasks that took place at work, and you might like to recall during your interview

1.   Understanding Individual Foresight

To make the most of the interview process, it would be helpful for us to have a shared understanding of how individual foresight is defined. In terms of this research project we define **Individual Foresight as...**

*...the ability of humans to **imagine future scenarios** by ...*

drawing on past experiences,

planning future actions,

*and **assessing these actions to determine future success***

(Atance & O'Neill, 2001; Schacter et al., 2007; Schacter et al., 2017; Suddendorf, 2017; Suddendorf & Corballis, 1997; Szpunar, Spreng, & Schacter, 2014; Tulving, 1985a)

2.   Preparing examples from your workplace experience/s

When you prepare for the interview, it would be helpful for you to bring 1 or 2 examples with you of significant work events / incidents / tasks, that you have *personally observed*, where individual foresight may have played a role.

If you're not sure about whether the events / incidents / tasks you are thinking about might be suitable, please consider the points below. If you answer yes to each of these questions, it is likely that the event / incident / task you're thinking about is relevant for this research project!

Did the event / incident / task:

✓ Occur at a workplace where I worked?

✓ Occur relatively recently, so that I may recall specific details with a good level of accuracy?

- ✓ Involve multiple factors, some, or all of which were under the control of employees involved in that task?

- ✓ Require employees to call on their past personal experiences (perhaps in a similar situation) to help understand what the outcomes of their *current* actions might be?

- ✓ Have a significant outcome that had the potential to impact (or did impact) on several other people or work outcomes?

- ✓ Require any of the employees involved to think about their past experience/s in order to help make a decision about their current actions?

Please find attached:

1. **Research Project Information Sheet** (for further information about the project)

2. **Participant Consent Form** (there will be a copy of this for you to sign at your interview)

Thank you again for agreeing to take part in this research project. I look forward to seeing you on [enter details of interview date / time / location]. Please do not hesitate to contact me in the meantime if you have any questions or concerns about the project.

Kind regards,

Melissa Innes

Melissa Innes
Associate Lecturer | USC Business School
Maroochydore DC QLD 4558 Australia
07 5459 4572 | minnes1@usc.edu.au | Web: www.usc.edu.au

Appendix 6 - Phase Two Interview Preparation

Dear [insert participant's name]

Thank you for agreeing to participate in my research project *'Exploring the lived experience of individual foresight in organisations'*. Foresight is a commonly used term, and most of us understand that it involves some sort of ability to think about the future and predict the impact of our current actions on that future. There seems to be a common understanding that having foresight enables us to make better decisions about our actions.

To prepare for the interview, please read through the following information, specifically to:

1. Understand the definition of individual foresight (for the purposes of this project)

2. Determine 1 or 2 personal examples of significant events / incidents/ tasks that took place at work and you might like to recall during your interview

3. Complete a short, 12-item questionnaire to help understand your tendency to think about the future

1. Understanding Individual Foresight

To make the most of the interview process, it would be helpful for us to have a shared understanding of how individual foresight is defined. In terms of this research project we define **Individual Foresight as...**

> *...the ability of humans to **imagine future scenarios** by ...*
>
> ***drawing on past experiences**,*
>
> ***planning future actions**,*
>
> *and **assessing these actions to determine future success***

(Atance & O'Neill, 2001; Schacter et al., 2007; Schacter et al., 2017; Suddendorf, 2017; Suddendorf & Corballis, 1997; Szpunar et al., 2014; Tulving, 1985a)

2. Preparing examples from your personal work experience

When you prepare for the interview, it would be helpful for you to bring 1 or 2 examples with you of significant work events / incidents / tasks, that you have *personally experienced*, where individual foresight may have played a role.

If you're not sure about whether the events / incidents / tasks you are thinking about might be suitable, please consider the points below. If you answer yes to each of these questions, it is likely that the event / incident / task you're thinking about is relevant for this research project!

Did the event / incident / task:

✓ Occur at work and involve me?

✓ Occur relatively recently, so that I may recall specific details with a good level of accuracy?

✓ Involve multiple factors, some or all of which were in my control?

✓ Require me to call on a past personal experience (perhaps in a similar situation) to help understand what the outcomes of my *current* actions might be?

✓ Involve *thinking* about my past experience in order to help make a decision about my current actions?

✓ Have a significant outcome that had the potential to impact (or did impact) on several other people or work outcomes?

Please find attached:

1. **Research Project Information Sheet** (for further information about the project)

2. **Participant Consent Form** (there will be a copy of this for you to sign at your interview)

Thank you again for agreeing to take part in this research project. I look forward to seeing you on [enter details of interview date / time / location]. Please do not hesitate to contact me in the meantime if you have any questions or concerns about the project.

Kind regards,

Melissa Innes

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Appendix 7 – Consent Form

Consent Form (signed by all participants)

Consent to Participate in Research

Exploring the lived experience of individual foresight in organisations

Ethics approval number: S191343

I have read, understood, and kept a copy of the Research Project Information Sheet for the above research project.

I realise that this research project will be carried out as described in the Research Project Information Sheet.

Any questions I have about this research project and my participation in it have been answered to my satisfaction.

I agree to participate in the above research project.

I give consent for data to be used in a confidential manner as described in the Research Project Information Sheet.

Please tick this box if you wish to receive a copy of the transcription of your interview.

Participant		
Name	Signature	Date

Student Investigator

Melissa Innes

- -

Name   Signature   Date

Appendix 8 - Master table of themes for Phase Two IPA analysis

1. THE PERSON

1a. Personal knowledge and experience
Personal learning from past experience
Alan: you can try and proactively learn from your past mistakes
Bonnie: wisened up to, you know...have obviously gone through many experiences
Matt: past experience, is it something that you're familiar with? Have you felt like this before? And you're linking up to that...

Existing knowledge
Alistair: You've sort of been around the industry long enough where - you've got a reasonably good appreciation.
Leo: from my experience and knowledge [ ] sometimes you've got people that are up there that are not experienced
Jake: So there's people [ ] who know more than I do about certain things - and I know more about certain things...

Past experience unrelated to job
Stephanie: a lot comes down to - comes down to your experiences in life
Hugh: traveling, or it's other things [ ] you're getting exposed to [ ] different scenarios, there's more foresight to draw from
Alistair: they might be really focused on their family - and have an immense amount of foresight in that space.

1b. Intuition
Intuition
Byron: I've had that impending feeling before [ ] looking and listening [ ] getting that sense in your gut and in your head that something isn't quite right.
Geoffrey: Just trusting your gut [ ] being raised by parents that empowered me to trust my gut [ ] empowered me to make decisions
Howard: I could understand why some people would do that. But when it's high stakes, you can't rely on intuition.

Physical response
Anna: it's important that we are in tune with our gut feelings. So sometimes when we get those strong kinds of feelings come to us and we can't quite pinpoint what's going on
Michael: I probably was solidly recalling previous situations where I was feeling uncomfortable
Ronnie: you do get that lump in your throat [ ] so your heart rate does go up and you do get a little bit sort of excited by it all.

1. THE PERSON cont.

1c. Individual skills and disposition
Emotional intelligence
Leo: And that's probably why [ ] I bite my tongue - sometimes - I don't know. It's best to be quiet and review it - look it up - get some facts.
Hugh: trying not to be overwhelmed by it I guess is the key part for us [ ] prioritizing our response - there's only so much you can do
Matt: first thing I do is definitely tell my team how I'm feeling so that I know if I'm acting anything differently than normal they know where my head's at.

Personal ability to assess or prioritise a situation
Alan: you can throw out just many different options. And then you can start thinking about the pros and cons of each of those options.
Brad: So I've really got to understand the now, and what's happening and sort of put everything in its place
Hugh: I'm constantly assessing the tasks that the situation is - and then making sure that I'm dealing with the highest priorities.

Role of confidence
Amanda: they trusted that you can do it [ ] you're just showing them why they shouldn't trust you [ ] you're just being so doubtful of yourself
Bonnie: Other people won't have that same confidence, and will probably just maybe hang around and try and help with the situation
David: I always I suppose second guess my ability level when it when it comes to a new role.

Impact of length of service
Edward: older blokes [ ] been here a long time probably don't like to share that information [ ] they just feel like if I tell somebody - I'll lose my job
Gill: you can take somebody who's brand new into the business [ ] they don't really have the same pattern recognition that we have
Ronnie: with an old culture [ ] people here [ ] have been institutionalised [ ] they don't have to use foresight - because their job is to go from A to B

Developing self
Brad: like you've got to have failed and failed and failed to keep sort of understanding what works, what doesn't.
Thomas: something would be happening in the business [ ] in marketing (for example) I don't really understand it so I'd pick up marketing as a subject.
Vincent: I don't like to knock back opportunities [ ] throw out an opportunity for me [ ] 99% of the time I'll think okay great - I'll have a go at that

Personal risk-taking
Sarah: I'm slightly risk averse. So I always think of what's the risk at the other end of this, you know?
Marie: I think if someone's open minded enough to learn, and to take some risks, to ask for help from others
Jake: With the more important stuff i write it in my diary [ ] covering my behind - so - if I've done something [ ] a lot of this stuff has legal ramifications

1. THE PERSON cont.

Challenge ideas for better solutions
Brad: your immediate thoughts, okay is to to address the now and sort of push back - I won't say aggressively - but quite forthright
Alan: everyone has the rose coloured glasses on [ ] you're struggling to look past the solution [ ] there's a lot of value in someone [ ] trying to pick it apart
David: I'd propose an idea, and then ask if they agree with that idea, or if they had a better solution.

Passionate about a cause
Alistair: And then, what it basically boiled down to [pause as emotion overcame participant] - was looking after the people.
John: If something is significant enough [ ] can paint that pretty clearly to people. People need [ ] more encouragement to find it more relevant to them.
Vincent: New people [ ] they're like sponges - so they want to take it all in. And they just continuously have an open mind on suggestions

Personal desire to avoid mistakes
Byron: In my mind, seeing as I was responsible - I would feel as though I've probably failed [ ] there's a personal pride in this.
Edward: I hate making the wrong decision [ ] it does affect my thinking overnight that if I've made a wrong decision - I just get disappointed in myself
Anna: I like to think I'm a person of integrity, and I like to do my work well.

Early intervention
Jake: one of the first on the job [ ] this is a big job [ ] I assessed it and basically got the control room to get the incident management team involved
Byron: I wrote a recommendation to people [ ] I'm disappointed it got that far [ ] I also feel very vindicated that what I said was correct.
Bonnie: I put out public [ ] signage, took some samples and then implemented a downstream monitoring program [ ] I could see what the impact was.

2. THE PROCESS

2a. Learning collaboratively
Sharing knowledge
Vincent: And you come out with your idea and I [ ] shut you down [ ] that's just not proactive [ ] it's got to be sort of an open [ ] discussion or relationship
Brad: on a big sheet of brown paper - a tool - we'll map everything out step by step by step - everyone gets a chance to speak
Sarah: So and then it's kind of a brainstorm with whoever I'm talking to, hopefully to bounce off each other

Developing Others
Ronnie: I'll normally bring up the experience part [ ] give a bit of praise to somebody [ ] when other people see that - we learn from that as well.
Matt: It's about us working collaboratively together [ ] the more we help each other out with different scenarios [ ] that's what a team does.
Marie: I've given myself this [ ] informal little coaching role [ ] I'm helping her slow down and think and, and to not make assumptions.

Working collaboratively
Alan: And if we can collectively all agree [ ] this is a good feedback to provide. We can collect all of that, make sure we've written it in the right way.
Darren: I even shared that with the company as well - a service provider and said [ ] can you just communicate this to your [ ] other service providers
Edward: So that take five is just I guess, everyone who has had experience there can talk about it - bounce ideas off each other - and learn

Learning from others
Alistair: To have a network of people that you know, you can contact them - if you're sort of seeking a bit of support or advice to resolve a particular issue
Geoffrey: that's why I get subject matter experts [it's not just about] my experience - it's [ ] my ability to interact with [ ] different people
Edward: when I was an apprentice working with an older electrician [ ] who'd been here for 30 years or 40 years before me - and knew that situation

2b. Developing understanding
Problem-solving
Sarah: So in my head, everything has got like a step and a process [ ] like if you were to do a Visio process map [ ] that reminds me of this situation.
Thomas: what i did from memory was, I tried to validate whether or not [ ] it was correct [ ] I'm conscious of the fact that [ ] a solution in one context might not be a solution in another
Howard: we had to find a way [ ] people that work in my branch, they did develop that, that solution very quickly but we had to divvy it up [ ] go from team-to-team sort of keep pushing the process along - helping them.

2. THE PROCESS cont.

Recording information

Alistair: my goal was to convince as many people as possible that we needed to report the same day - because if we let it go any longer than that - I was of the opinion that the environmental regulator would have not been impressed

Bonnie: I developed a sim-chart to show the steps [ ] because that was leading to a lot of conflicts [ ] between the environment team and [ ] control

Edward: you write down what you did, how you did it [ ] you open up the switchboard, you grab the little notebook and you go, - oh

Role of scenarios in foresight development

Leo: and I always use stories of my experience - I did this and it didn't, it didn't work. And I don't just tell them all the good ones.

Marie: and I struggle to anticipate what is likely to happen and to think about scenarios, but I've been forced to in my work, which I do find difficult

Vincent: I'm thinking about all these things [ ] like equipment we might need, how are we going to fix it. Possible problems that we might come across

Planning

Anna: Having a conscious understanding of the impact of goal setting [ ] go[es] a way towards helping people understand [ ] quiet time and [ ] reflecting

Rachel: Our projects and our people don't need the pass or fail response they need the sort of, you know that forward plan...

Geoffrey: a bunch of different synonyms [ ] planning [ ] investing the time [ ] if you prepare correctly [ ] you shouldn't be [ ] surprised.

Developing bigger picture view

Alan: often you get so lost in the day to day that you lose sight of where you've been and what you did last week

Anna: I like to [ ] understand the current situation [ ] to be mindful of the future but not thinking that I need to change anything immediately.

Gill: what benefit the organization can offer [ ] what benefits I can [ ] have from it. [ ] And it's about understanding what the greater picture can look like.

Visualisation

Alistair: after I talked to the operator in charge - I was visualizing what it all looked like [ ] to figure out what [ ] corrective actions could be taken

Matt: whiteboard is I'm a visual person, I like to put everything out so I can see it. So it's therefore - it's out of my head on something in front of me

Geoffrey: I guess in a very short period of time in my head sort of seconds [ ] I just developed over time the ability to almost like picture a scenario.

Role of technology

Hugh: we have sensors and things out in the field that will tell us that, ideally, we will figure out that something's going wrong [ ] fix it before the disaster

Hugh: and we can gradually see alarms start to go up [ ] so we'll go from maybe only having one or two red alarms [to] the whole screen will just be red

Hugh: We have a huge intranet just for ourselves which is not really pretty [ ] it's a functional sort of storage - for all of those bits and pieces

2. THE PROCESS cont.

2c. Cognition, reflection, and future-thinking
Cognition
Brad: in terms of your thinking, or what your angle or what lens you're looking through [ ] I can then target the conversations with that context in mind.
Byron: in my little mind - I'm going so fast thinking about things that I fail to to relate it to the next guy and explain the situation that I have in my head.
Hugh: we have an incident management room [ ] to help us facilitate that thinking so we write our actions up on the board [ ]

Reflection
John: reflecting on how you have acted [ ] which is the right and which is the wrong way [which] then informs your preparation for the future.
Matt: I think a lot of time [ ] you've got to give yourself time to think clearly [ ] question your thoughts and question your intuition and, and validate it all.
Janelle: If you're put on the spot [ ] my initial view is this - that's going purely off gut instinct [ ] I might need more time to think about this

Future-thinking
Darren: it will improve the culture [ ] the trust [ ] by doing these in-depth investigations, it might take [ ] longer [but] the outcomes are [ ] positive.
Matt: looking ahead, and I think it's going to help someone else. I think it's my job to tell them and help them through it as well
Marie: go over and over the different points because this is going to impact decisions made by the business - and will impact us in the future [ ] in terms of setting a precedent

3. THE OUTCOMES

3a. Organisational policies and procedures

Ronnie: we do have a procedure to follow. However, it comes down to probably more instinctive.

Stephanie: we all [normally] have a prestart - everyone meets at the site... we're called in to break ground and that meeting did not happen - if the meeting had have happened, it would have been picked up

Hugh: we'll use our foresight to identify things [ ] and we'll start to put that process and document that into a formal checklist or something like that.

3b. Decision-making

Anna: each and every remuneration decision is a sort of personal outcome for somebody in an organization. So, I'm very conscious of that.

Byron: It's important that they can make a decision of their own bat - change something - repair something a certain way and get a result

Gill: And I have to make sure that that I have the right level of EQ and I'm professional about this.

3c. Taking action

Alistair: I'm going to get to slayed [ ] I've talked directly to the chairman - and brought to his attention a major issue that he's completely oblivious to.

Bonnie: so I wanted to put that in practice in this scenario, so I responded on the callout

Jake: I've done it myself [ ] 'Why did I do that - or I haven't done that...' [ ] it's a pressure thing and you're trying to get something to happen

4. THE CONTEXT

Leadership style

Janelle: And when I spoke to him he's like, right, I really want to hear more about this - let's make a time [ ] Can you jot down some thoughts? [ ] I want you to know we support you [ ] thank you for the feedback. [ ] Do you have any ideas on how we can fix this? Like, not only do I want you to come to me with this issue, but what do you think would fix this?

Hugh: and some good leaders will say hey - remember when we did this, and this happened - or we didn't do that, and this happened - people go - oh yeah - let's not let that happen again - let's do it better - and you can get the collective sort of working on that itself.

David: that's calling on Team experience and that's how I actually prefer to lead. I don't really dictate much for my level. I like a collaborative approach.

4. THE CONTEXT cont.

Job role or job design

Bonnie: I don't care where anyone sits to do any job [ ] the systems and processes should be in place to enable anyone [ ] to be able to execute a task.

Hugh: I was gonna say I think people often that I see applying it [IF] are stronger leaders - but I'd take that back - I do see a lot of engineers and stuff using it better - perhaps not strong leaders - but are still drawing from that foresight - that experience

Leo: being a manager and being what my role is [ ] I've got to be careful what I say and how I say it. Because it can be interpreted the wrong way.

Regulatory control

Alistair: the regulator's got powers to be able to come in and hold us accountable for not meeting our license conditions.

Bonnie: there's two areas that I deal with everything I do and how I act, and that's based around the enforcement guidelines that the regulator has, they make decisions on culpability and environmental harm.

Rachel: Nowadays...no way. You know, the regulatory, liability, legal action, costs. Consequences and risks are very different today.

Stress or demanding work

Stephanie: because in this role there's a [ ] bit of scrutiny on you especially around xxx [ ] there's a bit of pressure to xxx

Ronnie: and then go on the map - and someone's trying to grab you and talk to you - and then another person is trying to talk to you - then the the control room's saying "it's getting worse" - so it's all happening frequently at once

Hugh: there's only so much you can do - we only have so many field staff out there [ ] we start to prioritize how we're going to deal with this.

Role of trust

Edward: we've had other leaders [ ] tell you everything [ ] they're quite honest with you [ ] it may not be what you want to hear, but I appreciate it - because life isn't always easy, life isn't always what you want it to be, but I do - I do respond better to more openness

John: I'll sense check that with someone else that I know and know and trust.

Leo: And the big word is trust - and I want the guys here to trust me, and I'm building that trust culture I suppose.

Fear of consequences

Janelle: you can have real risk associated [ ] with speaking up sometimes - people are punished for passing on relevant information based on foresight [ ] if it doesn't accord with the next person or persons up the line or their view or their objectives

Anna: And fear of getting things wrong [ ] what's gonna happen if I press the button - the train won't leave the station? There will be no accident? I might look like an idiot and I might get hurt.

Brad: So I guess the decision you make is you can - your immediate thought is always fear and what's gonna happen - is this gonna be successful?

4. THE CONTEXT cont.

Influence of risk-taking tolerance of firm
Brad: when I see people making decisions [ ] I haven't told you all the information yet [ ] But that's a risk and rule type thing. You've got to keep moving.
Ronnie: if you have a leader that lets you be comfortable to making a mistake [ ] and to sort of be open and honest about it
Janelle: These risks are real. The regulator is looking. It's not theoretical [and] she's like, right, I really want to hear more about this - let's make a time

Role of autonomy or empowerment
Edward: uncomfortable making a decision on their own back - because they may have worked in a place before where they weren't allowed to make decisions. You know, they may not have been empowered to, to learn and to - I guess grow
Geoffrey: You create an environment where people are comfortable to challenge and feel as though they have the right to
Howard: you have to give people the room to make their own decisions, like if you micromanage every situation, then people won't think for themselves, and they won't develop foresight or they won't develop this sense of structured thinking.

Openness and approachability
Alistair: He was very appreciative. He made me feel comfortable that there'd be absolutely no repercussions for me talking openly and honestly to him. So, that was – reassuring
Edward: So without your leader being open and honest with you, I don't think I can be as open and honest with my team and it works [ ] down the chain
Sarah: the culture that we have [ ] really leads itself to, to being a lot more open and transparent and dynamic [ ] that's really led from the top down.

Role of authority power
Alan: a very senior leader [doesn't] have [ ] emotional intelligence [ ] they've got enough say [ ] you're going to do what they say irrespective.
Vincent: he'd say right - this is how I want it done...and you'd go 'well that's a stupid way to do it' [ ] dare do it not the way [ ] you'd get yelled [ ] at
Stephanie: So if I have foresight [ ] it's the people up top that make the decisions [ ] you don't actually have any influence to change the future.

Frustration experienced when foresight not appreciated
Brad: so I'm taking four hours to take people through [ ] when I see people making decisions [without] all the information yet - how can you do that?
Leo: I just got to be careful what I say because I can go - I've got a little bit of a personality where I start waving my arms about and go ah you stupid idiot
Sarah: whenever I'm in meetings, I feel like I'm always the one that's like 'great idea...but have you considered that this this this...'

4. THE CONTEXT cont.

Reward or acknowledgement
Edward: xxx has a reward and recognition program [ ] they make a pretty big deal of it [ ] I got nominated for [ ] that job [ ] I was pretty excited.
John: it's just nice to have that that feeling of validation.
Ronnie: I'm not going to say praise them, but accept them and understand them and respect them and understand them

Employees with foresight are troublemakers
Bonnie: I think the image of people having been a troublemaker because they have insight is is I am so sad that that view is held by those people.
Sarah: I have worked in an environment like that, where, you know, if your head of - was at the table telling you that this is a new initiative that they want to roll out, then it was kind of the culture to go - yeah, great idea rather than the challenge.
Ronnie: Some of the best things come from people breaking rules - and having foresight really

Importance of tenure
Geoffrey: To add value to foresight. I mean, that's, that's why intellectual property is worth something to a business. It's why tenure is important.
Howard: If this had of been a brand new…we would have really struggled to identify those options so quickly. So, you know, corporate knowledge was invaluable here. You know, as much as corporate entities love, you know, love having people come in - and bring in fresh, fresh ideas - and that's important and there needs to be a blend of that. It's also important to retain that corporate knowledge.
Darren: we've had a guy [ ] been here 45 years [ ] I thought to myself [ ] why can't we just use this person, as a mentor? [ ] with that skills and experience.

Financial cost to organisation of foresight
Byron: Nine months ago, I wrote a recommendation for [ ] equipment [ ] which was decided at the time that oh - that will be too expensive.
Edward: Straightaway I think of how I'm going to do this safely [ ] but we also don't want to spend extra money that we don't have to [ ]