

**Towards a Stratified Leadership Context Framework –  
an integrative approach**

HENLEY BUSINESS SCHOOL  
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Administration

by

Torben Noerby

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## **Declaration**

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Torben Noerby, May 2021

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I would like to thank Professors Malcolm Higgs and Vic Dulewicz, my supervisors, for their mentorship and invaluable guidance throughout the DBA. Also, I would like to thank the DBA team at Henley for their practical support.

## Dedication

*This thesis is dedicated to Karina, Frederikke and Mikkeline.*

## Abstract

Leadership is influenced by context. Nevertheless, when it comes to leadership context, a gap in the literature has existed for decades. Moreover, understanding the relationship between leadership context and the ability to lead effectively is a longstanding challenge for practitioners. This study delivers a significant original contribution by developing a nascent Stratified Leadership Context Framework.

An integrative literature review synthesised the knowledge from sixty highly cited review articles and related literature into a new conception of leadership context. Drawing also on Critical Realism philosophy, the synthesising resulted in eight propositions concerning the nature of leadership context. In continuation, the synthesis produced sixty-eight hypotheses regarding the contextual factors; their causal effects; and the leader's possibilities to shape the factors. The propositions and hypotheses were explored in a two-round Delphi study.

Three panels, comprising HR practitioners, Leadership scholars and Leaders, participated. The one hundred nine tenured leadership experts from 24 countries agreed that twenty-eight factors comprise the leadership context. The study found that helping and hindering effects on leadership and work performance exist for twenty-five factors. Also, that sixteen factors have the power to influence the choice of leadership behaviour. Moreover, that twenty factors can be shaped through leadership interventions and that shaping context can promote desired organisational intentions.

The findings extend the understanding of climate strength; enable the contextualisation of extant leadership theories; and, equip researchers to situate new studies enhancing their generalizability. Also, it assists leaders and leadership developers in matching differing leadership contexts. Moreover, the research paradigm enabled theorising about a complex phenomenon. Specifically, the study operationalised the critical realist principles of epistemic relativity and judgemental rationality in applying the integrative literature review and the Delphi panel method. Further research into contextual influences and effects between contextual factors is warranted. Finally, the results can be applied by practitioners for enhancing recruitment, onboarding, and leadership development.

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# Chapter One

## 1. Introduction

### 1.1 The research problem – a practitioner’s perspective

It is important to understand one's standpoint as a researcher (Crotty, 1998; Easterby-Smith, Thorpe and Jackson, 2015), and this Author entered the MSc/DBA to solve a practitioner’s problem. With a starting point as an army officer (1989-1999), followed by a career in two international companies ending as a Global Senior HR Director (1999-2007), this Author has built a leadership consulting company comprising 50 employees (2007-). Since 2007 this Author has developed and implemented corporate leadership development programmes for a range of international companies across different industries, for example, ISS (Facility Services), LM Wind Power (Wind blades), Unifeeder (Feeder and Shortsea services), Atos Medical (Medical devices), and Swep (Heat Exchangers). In 2016, 25 years of leadership experience and 11 years of consulting had revealed a recurring challenge in analysing and understanding the leadership context to advice on leadership fit. Hence, in 2016 this Author enrolled in the MSc/DBA to address this challenge.

The development of the Research Proposal (Noerby, 2018b) and the concurrent Pilot Study (Noerby, 2018a) took its offset in a seminal review by Porter and McLaughlin (2006) summarising the state of the emphasis on organisational context in Leadership Research. Porter and McLaughlin (2006) reviewed 16 years of leadership literature in twenty-one major journals to determine the nature and extent of attention to organisational context affecting leader effectiveness. See Appendix A for a list of the articles reviewed by Porter and McLaughlin. They concluded that the empirical literature largely did not include the interplay of organisational context and leadership as central variables, but tended to include context almost as an “*afterthought*” (Porter and McLaughlin, 2006, p. 571). This Author’s early analysis of the literature reviewed Porter and McLaughlin (2006) and related literature emphasising context comprised ninety-six articles (Noerby, 2018b) confirming very diverse approaches to leadership context. The fragmented and multidimensional picture of leadership context was subsequently confirmed by reviewing sixty well-cited review articles. Together, a landscape of a growing body of knowledge about leadership context (Dinh *et al.*, 2014; Oc, 2018), which suffer from a lack of established frameworks for understanding leadership context (Johns, 2006; Oc, 2018) justifies this study.

This first chapter provides an overview and outlines the research problem, the research focus, and the thesis structure. Next, the chapter briefly explains how the research is undertaken and highlights the key findings and contributions.

## 1.2 Overview

This study develops a framework for leadership context, which can promote contextualisation of leadership research, and that can assist practitioners exercising more effective leadership by taking context into account. It does so by developing a framework for leadership context by integrating knowledge from multiple strands of the literature into an empirical Delphi study leveraging experts' judgment. This offers a relevant and rigorously developed Stratified Leadership Context Framework for both Practitioners and Researchers, promoting the contextualisation of research and leadership in practice. The research design differentiates in scope and scale from other Doctorates applying the Delphi method through the engagement of three expert panels and applying an integrative literature review for theorising leadership context. The structure of the thesis is displayed in figure 1 below.

**Figure 1. Thesis structure, chapter overview**

<b>1</b>	<b>Introduction</b>	
<b>2</b>	<b>The call for leadership context research</b>	
<b>3</b>	<b>Developing a conceptual framework for leadership context</b>	<i>Sixty highly cited review articles were analysed applying Critical Realist philosophy to identify eight propositions warranting the conceptual framework.</i>
<b>4</b>	<b>The Intentionality stratum</b>	<i>An integrative literature review enriched the conceptual framework into a theoretical framework with definitions and hypotheses.</i>
<b>5</b>	<b>The Determinant stratum</b>	
<b>6</b>	<b>The Systemic stratum</b>	
<b>7</b>	<b>The Social stratum</b>	
<b>8</b>	<b>The Intrinsic stratum</b>	<i>One chapter for each stratum identified in the conceptual framework.</i>
<b>9</b>	<b>Research paradigm and methodology</b>	
<b>10</b>	<b>The Delphi study's research results</b>	
<b>11</b>	<b>Contributions and discussion</b>	<i>Concluding in a nascent Stratified Leadership Context Framework and the contributions to theory, practice and methodology.</i>

Source: This thesis



The leadership context is a complex matter and for an overview of the architecture developed through the integrated literature review in this thesis, see table 1 below. This architecture is also the structure of the sections in chapters four to eight, each covering a stratum.

**Table 1. The architecture of leadership context developed in the thesis**

Stratum	Contextual factors	
The intentionality stratum	<ul style="list-style-type: none"> <li>• The intention to pursue exploitation and task performance.</li> <li>• The intention to pursue exploration and adaptive performance.</li> <li>• The intention to pursue human capital quality and contextual performance.</li> </ul>	
The determinant stratum	<ul style="list-style-type: none"> <li>• Physical distance.</li> <li>• Risk intensity.</li> <li>• External complexity.</li> <li>• External dynamism.</li> </ul>	
The systemic stratum	<ul style="list-style-type: none"> <li>• Hierarchical level.</li> <li>• Centralisation.</li> <li>• Formalisation.</li> <li>• Internal complexity.</li> <li>• Interdependence.</li> <li>• Resource constraints.</li> </ul>	
The social stratum	Adaptive climates	<ul style="list-style-type: none"> <li>• Climate for exploitative learning.</li> <li>• Climate for explorative learning.</li> <li>• Climate for change.</li> </ul>
	Performance climates	<ul style="list-style-type: none"> <li>• Climate for diligence and discipline.</li> <li>• Climate for goal-path clarity and stretch.</li> <li>• Climate for service.</li> </ul>
	Supportive climates	<ul style="list-style-type: none"> <li>• Climate for collaboration.</li> <li>• Climate for productive discussion.</li> <li>• Climate for fairness and justice.</li> <li>• Climate for empowerment.</li> </ul>
	Protective climates	<ul style="list-style-type: none"> <li>• Climate for safety.</li> <li>• Climate for ethical conduct.</li> <li>• Climate for sustainability</li> </ul>
The intrinsic stratum	<ul style="list-style-type: none"> <li>• Value composition and diversity.</li> <li>• Personality composition and diversity.</li> <li>• Expertise composition and diversity.</li> </ul>	

Source: The literature review

### 1.3 Research problem

Context influences leadership and its effectiveness (Johns, 2006; Oc, 2018; Osborn, Hunt and Jauch, 2002; Osborn, Uhl-Bien and Milosevic, 2013; Porter and McLaughlin, 2006). At the same time, leadership context comprises multiple factors, and the inclusion of factors often differ depending upon the researcher's perspective, and the researched reality itself (Dinh *et al.*, 2014; Klimoski, 2012; Osborn, Uhl-Bien and Milosevic, 2013; Shamir, 2012; Uhl-Bien, Marion and McKelvey, 2007). One approach to the consideration of the context in leadership research entails selection of a few contextual variables and linking these to the contingent choices of leader behaviour (e.g. Blake and Mouton, 1972; Fiedler, 1964; Hersey, Blanchard and Johnson, 1969; House, 1971; House, 1996; Vroom and Yetton, 1973; Yukl, 2013). In this approach, the contextual understanding is integrated into the leadership theories limiting the applicability if a researcher desires to apply an alternative theory, or when a practitioner meets variation beyond the theory's coverage. Another approach is the use of universal leadership theories excluding context contending that a universal range of effective leader practices exists (e.g. Bass, 1985; Burns, 1978; Hamlin and Hatton, 2013; Kouzes and Posner, 2006). In between are perspectives acknowledging that competing contextual demands coexist in a complex interplay and that the leader needs to navigate accordingly (e.g. Quinn and Rohrbaugh, 1981, 1983; Uhl-Bien, Marion and McKelvey, 2007).

As suggested by Drath *et al.* (2008) and Yukl (1989), this thesis contends that the universal-contingent discussion is rooted in different ontological stances based on the purposes of each particular study; and, in the necessary practical reduction of variables in any given research project. This does, however, not aid the practitioner much. It is a persistent picture within the literature that only a few contextual variables are included in leadership studies. These contextual variables are defined narrowly after a dependent variable is selected (Dinh *et al.*, 2014; Porter and McLaughlin, 2006). Hence, one main challenge for researchers is that context is defined for each study without reference to a common framework for leadership context, limiting the generalisability of findings (Johns, 2006; Oc, 2018). In turn, this leaves both academics and practitioners with limited guidance on contextualising leadership. This study contributes to filling that gap by providing a significant original contribution in the form of a framework for leadership context.

## 1.4 Research questions and thesis structure

This research is focused through four successive research questions corresponding with the thesis' structure (see figure 1 above). Chapter 2 accounts for a substantive and long-lasting call for putting context at the centre of research to understand leadership better. This call amplifies the need for an ontological starting point and prompts the first research question:

1. What is leadership context?

Chapter 3 presents the conceptual framework for the leadership context that emerged from the integrative literature review to provide an initial answer. The development of the framework prompts the remaining research questions:

2. Which factors comprise leadership context?
3. What are the causal tendencies influencing leadership and work performance behaviour of these factors?
4. Which factors in the leadership context can be influenced by leadership interventions?

Chapter 4-8 develops the conceptual framework into a theoretical framework through an integrative literature review. Throughout these chapters, the contextual factors' causal tendencies are considered in relation to leadership and work performance behaviour. In addition, for the relevant factors, it is investigated if certain leadership interventions can influence malleable contextual factors. Thereby, the literature review provides a theoretical answer to the research questions and tees up the Delphi study, which further develops the emerging framework for the leadership context. Chapter 9 outlines the research methodology of the Delphi study, while Chapter 10 reports the results hereof. In Chapter 11, the findings are discussed and concluded in a nascent framework for leadership context. Finally, also in Chapter 11, the original contributions to knowledge, limitations and considerations concerning further research are also addressed.

## 1.5 Research strategy

Sixty review articles formed the base for an integrative literature review, an approach chosen because it accommodates theory-building well (Torraco, 2005; Torraco, 2016). The decision to undertake an integrative literature review related to the ambition of integrating existing ideas with new conceptions to provide a new perspective on leadership context. It was considered to apply a systematic literature review approach; however, the systematic approach is aggregative, attempting to cover all relevant studies in a field (Denyer and Tranfield, 2009). This aggregation can then form a basis for synthesising the literature into new conceptions (Denyer and Tranfield, 2009). In contrast, an integrative literature review in a mature field follows a pattern of including representative literature to synthesise new understandings (Torraco, 2016). The leadership literature is vast (Dinh et al., 2014). In conjunction with the piece-meal approach to the inclusion of leadership context (Porter and McLaughlin, 2006) it represents a very diverse and broad array of mature leadership literature, which is paradoxically immature on leadership context (Dinh et al., 2014). In such cases, and with this study's purpose, an integrative literature review serves the purpose to *"synthesise knowledge in its current state through a reconceptualisation of the topic"* (Torraco, 2016, p. 409). It is recognised that a literature review in management and organisational studies is found to be *"particularly challenging due to the fragmented nature of the field"* (Denyer and Tranfield, 2009, p. 677). Hence, with the ambition of generating *"new knowledge about the topic reviewed"* (Torraco, 2005, p. 356) in a vast and fragmented field, the integrative approach was selected. The limitations of the integrative literature review were considered, and to form a starting point free from the author's pre-conceptions, keywords were derived from a review of the literature reported by Porter and McLaughlin (2006) in their seminal article on leadership and the organisational context, as having a moderate-to-high emphasis on organisational context. See appendix A for a list of these articles. The keyword-search strings derived are; "Leadership"; "Followership"; "Organizational AND context"; "Leadership AND context"; "Organizational AND climate"; "Ambidex"; "exploration AND exploitation"; "Job performance"; "Work performance"; "Contextual performance" OR "Organizational Citizenship" OR OCB; "task performance" OR "adaptive performance" OR "performance adaptation." Naturally, this starting point could infuse a bias into the subsequent search for representative literature missing out on relevant literature; a limitation that exists in all literature reviews in fragmented areas (Denyer and Tranfield, 2009). In continuation, it was decided to identify representative literature by searching for review articles as these have a higher impact on the field than single study articles (Podsakoff et al., 2018).

In June 2018, a literature search was undertaken using the Scopus database, the largest abstract database in social sciences ([www.scopus.com](http://www.scopus.com), accessed June 2018). The initial search of relevant review articles was done searching for review articles and with a keyword search in Title, Abstract and Keywords. Limited to Social Sciences and only including review articles cited more than 75 times to ensure a selection of high impact extant literature as the study's foundation. The use of citations as a measurement for the impact of published research is well-supported (Bergh, Perry and Hanke, 2006; Dewett and Denisi, 2004; Podsakoff et al., 2018). Furthermore, articles that build and test or change existing theory seem to receive more citations (Colquitt and Zapata-Phelan, 2007; Judge, Cable, Colbert and Rynes, 2007), as do articles with high significance to the field (Daft, Griffin and Yates, 1987) and articles that clarify fuzzy concepts (Daft, Griffin and Yates, 1987). As the study aimed to develop a framework, the link between higher citations and 1) focus on theory development, 2) significance and 3) clarification of concepts warrant using citations as an inclusion criterion. The choice of 75 citations as the threshold was guided by an assessment of relevance to the research purpose and included 20% ( $n = 1,471$  of a total  $n = 7,249$ ) of the returned reviews for qualitative evaluation. In continuation of the search, a qualitative assessment of the review abstracts ( $n = 1,471$ ) was undertaken selecting 54 reviews constituting the first part of the representative body of literature. As the context is underemphasised in extant research (Dinh et al., 2014; Hunter et al., 2007; Porter and McLaughlin, 2006), it could be a limitation to develop a theoretical framework based on review articles not capturing emerging perspectives on context. Hence, to capture emerging theoretical insights that could advance an integrative understanding of the leadership context, a similar search was undertaken in a primary outlet for emerging theory; the Academy of Management Review (AMR). The search returned 63 articles, and six articles were selected through the qualitative assessment (Schoorman, 2007; Pawar and Eastman, 1997; Johns, 2006; Hogg, Van Knippenberg and Rast, 2012a; Denison, 1996, Benner and Tushman, 2003). Together the sixty articles formed the representative literature sample reviewed to develop the theoretical framework. The selected articles are marked with an \* in the reference list. The review articles span nine strands of research: Work performance behaviour; Followership and shared leadership; Teams and collaboration; Organisational context and work design; Organisational culture and climate; Cross-cultural leadership and national cultures; Leadership effectiveness; Exploration, exploitation, and ambidexterity; and Leadership operationalised by different theories. The review articles, which represent 3,478 empirical and 400 conceptual studies, were subsequently thematically content analysed. In the integrative literature review, an approach chosen in this study is thematic structuring, where the patterns in the literature create clarity about how the main concepts

come together (Torraco, 2016). Memos were developed for all review articles capturing contextual factors and themes. Through multiple iterations, the emerging themes were developed into a thematic template (King, 2018; King, 2004) enriched and applied throughout the study. From this template during the literature review, relevant literature cited in the reviews, citing the reviews, citing the same sources, or written by the same authors were purposefully included. The thematic review of the reviews and tracked literature allowed the development of factor definitions and causal effects summarised in the tables after each section in the literature review, together representing the theoretical framework. This approach differs from a systematic literature review, where the protocol is often pre-determined and only slightly adjusted as the review progresses (Denyer and Tranfield, 2009). This is possible in the systematic literature review as it rests upon a delineated body of literature encompassing "*as much as possible of the research relevant to the particular review question(s)*" (Denyer and Tranfield, 2009, p. 683). During the thematic literature analysis, it became clear that the emerging patterns suggested applying a research philosophy accommodating the multi-faceted nature of leadership context. Hence, a critical realist paradigm (Danermark, Ekström and Karlsson, 2019) was adopted as a lens in developing the conceptual framework. Hereafter, the thematic analysis of the reviews and relevant related articles was organised by the conceptual framework, enriching it into a theoretical framework that formed the basis for a modified Delphi study. The modified Delphi approach was chosen as it is well suited for theory building (Brady, 2015; Okoli and Pawlowski, 2004; Skinner et al., 2015). The research paradigm and the Delphi methodology are further elaborated in chapter 9.

## **1.6 Key findings and contributions**

This thesis developed a Stratified Leadership Context Framework which constitutes a significant original contribution to knowledge. The thesis uncovered that leadership context comprises the contextual factors holding causal powers to influence leadership or work performance. It uncovered twenty-eight such factors and three causal tendencies related to the factors: 1) influencing the choice of leadership behaviour, 2) helping, and 3) hindering leadership and employee work performance. Also, the thesis uncovered that twenty of the contextual factors are malleable and can be influenced by leadership interventions. The study results extend the existing literature on leadership context (e.g. Johns, 2006; Oc, 2018) and contribute significant steps towards a common leadership context framework. The thesis answers the long-lasting calls (e.g. Dinh et al., 2014; Porter and McLaughlin, 2006) for research placing leadership context in the centre.

The Stratified Leadership Context Framework developed in this thesis could be applied for contextualising existing leadership theories such as Complexity Leadership Theory (Uhl-Bien, Marion and McKelvey, 2007) or the Full Range Leadership Theory (Bass, 1985). The thesis operationalises intentionality in leadership by linking organisational intentions to work performance behaviours as the desired leadership outcomes. It extends the range of existing leadership theories such as Exemplary leadership theory (Kouzes and Posner, 2006) by adding leader behaviour which influences malleable contextual factors to promote the organisational intentions. Moreover, the findings could be used for extending existing contextual frameworks such as Schein's Cultural Model (Schein and Schein, 2017) or the theory of Leader Distance (Antonakis and Atwater, 2002).

The implications of applying the Stratified Leadership Context Framework for leaders are that they could make more informed choices about which leader behaviour to enact. A leader would be given a better understanding of promoting an organisation's performance by shaping the malleable context. HR Professionals could improve their understanding of the leadership context when recruiting, increasing the likelihood of matching the right candidate for the job. Furthermore, the application would enable acceleration of the onboarding of new leaders as conveying the contextual demands and restraints is helped by the framework. In the same vein, a leadership development consultant could apply the results produced by this thesis for tailoring and targeting leadership development interventions. Also, researchers would increase the generalisability and transferability by situating their studies with reference to an established leadership context framework. Finally, the study contributes to methodology by demonstrating how Critical Realism can be applied in a consistent research paradigm with an integrative literature review and a Delphi study to theorise about a complex phenomenon, leadership context.

# Chapter Two

## 2. The call for leadership context research

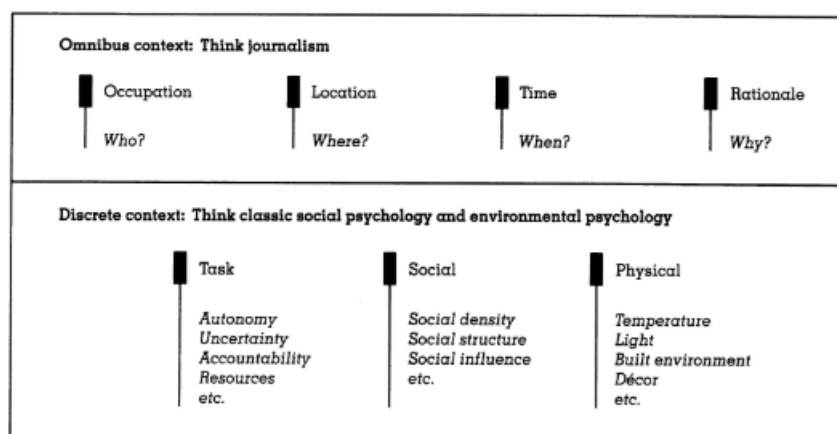
This chapter accounts for the strong and long-lasting call for research into the leadership context. It situates the research in the literature and lays the foundation for developing the conceptual framework for leadership context, which follows in chapter three.

Increased attention to the importance of context to leadership has emerged over the past two decades giving it more weight in leadership research (Campbell, 2012; Dinh *et al.*, 2014; Hannah *et al.*, 2009; Johns, 2006; Klimoski, 2012; Oc, 2018; Osborn, Hunt and Jauch, 2002; Osborn, Uhl-Bien and Milosevic, 2013; Porter and McLaughlin, 2006; Shamir, 2012; Uhl-Bien, Marion and McKelvey, 2007). The increased attention is, however, not supported by a move towards placing leadership context at the centre of research, but rather by paying more attention to the inclusion of a few contextual factors in studies (Dinh *et al.*, 2014; Oc, 2018; Porter and McLaughlin, 2006). Oc (2018) reviewed literature as a follow up to the call from Johns, who in his 2006 article on *The Essential Impact of Context on Organisational Behavior*, found no distilled and widely accepted framework for organisational context, a state that Oc confirmed to remain the case. To understand the rise in attention to the leadership context, we will start in 2002. Just after the turn of the millennium, Osborn, Hunt and Jauch (2002, p. 797) explored a “*neglected side of leadership*” with an underlying idea that leader effectiveness depends on the context. Osborn, Hunt and Jauch (2002) proposed a contextual theory of leadership based on a discussion of extant literature in their conceptual article. They argued: “*..that leadership itself is embedded in its context. One cannot separate the leader(s) from the context any more than one can separate a flavour from food*” (p. 799). The flavour-food analogy could be interpreted as a call for mapping out the spices and other ingredients interacting in food production. However, they followed a more traditional contingency route and discussed how variations in volatility and complexity come together in a typology of four contexts: stability, crisis, dynamic equilibrium, and the edge of chaos. In turn, how these contexts interact with leadership in terms of pattering of attention and network leadership (Osborn, Hunt and Jauch, 2002). Interestingly, Osborn, Hunt and Jauch (2002) started with a contextual framework, rather than including context from any leadership theory's vantage point.



They drew upon complexity theory, which was also the cornerstone in the introduction of Complexity Leadership Theory some years later (Lichtenstein *et al.*, 2006; Uhl-Bien and Marion, 2009; Uhl-Bien, Marion and McKelvey, 2007). In Complexity Leadership Theory, leadership context is considered as Complex Adaptive Systems, meaning that "*Contexts are structural, organisational, ideational, and behavioural features — the ambience of interactions among agents, hierarchical divisions, organisations, and environments – that influence the nature of mechanism dynamics*" (Uhl-Bien, Marion and McKelvey, 2007, p. 304). In line with Osborn, Hunt and Jauch (2002) Complexity Leadership Theory (Uhl-Bien, Marion and McKelvey, 2007) offers an important conceptual understanding of the networks of interaction, tension systems, and interdependencies which are at the centre of the complexity theory. However, if one is to understand how to cook, it is not enough to focus on the processual mechanisms in the pot, one also needs to understand which ingredients add which flavours. Together, the increased attention to the context in leadership research (Dinh *et al.*, 2014; Oc, 2018; Porter and McLaughlin, 2006) and the rise in systemic contextual understanding (Osborn, Hunt and Jauch, 2002; Uhl-Bien, Marion and McKelvey, 2007) suggest that a list of ingredients could advance the understanding of leadership context. Such a list of 'ingredients' would pertain to the context structures, factors and their causal effects relevant to leadership and its outcomes.

As previously mentioned, another significant contribution in understanding leadership context came from Porter and McLaughlin (2006) who reviewed 16 years of leadership literature. They concluded that the empirical literature largely did not include the interplay of organisational context and leadership as central variables. However, some authors have focused on context as central, and an important example is Johns (2006), who suggested categorisation of context into Omnibus and Discrete context, where the former pertains the Who, What, Where, and When, while the latter concerns Task, Social, and Physical context. For the Omnibus category, Johns (2006) argued that good research "*tells a story*" (p. 391) by describing who is being researched, at which geographical site, and during which events the research is conducted. Johns (2006) based the 'Discrete context' category on classic social and environmental psychology and exemplified with three context sub-dimensions; i) socially constructed context, (e.g. social density, structure and influence); ii) task-related context with variables such as uncertainty, autonomy, accountability, resource availability; and iii) physical conditions, (e.g. built environment and temperature). See figure 2 below.

**Figure 2. Some Important Dimensions of Context**

Source: Johns (2006)

Johns (2006) found that context restricts the range of investigated variables, which can have a profound effect on the analysis and interpretation of results. Furthermore, context can reverse causal directions in research findings; can prompt curvilinear effects and can threaten validity (Johns 2006). The examples provided by Johns (2006) focused on the effects on research results rather than on leadership itself. Also, he stressed that the three dimensions of the discrete context served the purpose of exemplifying, not exhausting, the phenomenon. Eight years later, in 2014, Dinh et al. undertook an extensive qualitative review of 13 years of leadership theory published across ten top-tier journals and considered contextual factors influencing leadership an “*under-researched topic*” (p. 41). They found increased attention to contextual factors indicating that context was no longer just an ‘afterthought’ in research, as Porter and McLaughlin (2006) stated. Recently, in his 2018 systematic review of how contextual factors shape leadership and its outcomes Oc used Johns’ (2006) exemplification of context as a categorical framework, to “*adapt it to define and fully portray the leadership context*” (p. 219). He added a temporal dimension to the discrete context category and in line with Johns (2006) assumed a focus on how contextual factors influence research rather than leadership itself. The methodological emphasis on context’s influence during the research (Dinh *et al.*, 2014; Johns, 2006; Oc, 2018; Porter and McLaughlin, 2006), rather than a focus on which context should be included to understand the nature of leadership indicate a tendency towards ‘controlling for’, rather than ‘understanding’ context in leadership research. Investigating the methodological emphasis on context served the purpose in the reviews evidencing the attention to the context in research (Dinh *et al.*, 2014; Porter and McLaughlin, 2006), and in exemplifying context’s importance to leadership (Johns, 2006; Oc, 2018), but only indicates factors in a framework for understanding leadership context.

In contrast, researchers who set out to develop a context typology or categorisation seem to assume an ‘understanding context’ starting point, i.e. investigating context as a central phenomenon. Examples are: i) Hannah et al. (2009), who adopted such an approach suggesting a typology for extreme contexts; ii) Antonakis and Atwater (2002), who reviewed literature to propose a theory of leader distance comprising three independent dimensions; iii) Osborn, Hunt and Jauch (2002), who suggested four categories of context and in turn, outlined the consequences for leadership; and, iv) the GLOBE project, which started by investigating societal value differences, followed by an investigation of implicit leader expectations (House *et al.*, 2002). Despite these good examples, the literature search identified no studies that aimed to develop a framework for leadership context beyond a few selected dimensions. Conversely, in the studies reviewed, the pattern is a deliberate inclusion of a few contextual factors guided by the leadership theory; the chosen outcome variables; or the relations between leadership and outcomes.

Consequently, in theorising about leadership context independent from any particular leadership theory, the variety of leadership theories and outcomes addressed in the reviews was investigated. This was done to ensure that a framework for leadership context accommodates the many well-warranted perspectives on leadership and its outcomes. Hence, the framework development sought to accommodate the diversity represented in the reviews considering Full Range Leadership (Antonakis, Avolio and Sivasubramaniam, 2003); Transformational Leadership (Hoyt and Blascovich, 2003; Purvanova, Bono and Dzieweczynski, 2006); Transactional Leadership (Elkins and Keller, 2003; Wang *et al.*, 2005); Authentic Leadership (Avolio and Gardner, 2005; Avolio *et al.*, 2004a); Complexity Leadership (Avolio, Walumbwa and Weber, 2009; Dinh *et al.*, 2014); Shared Leadership (Avolio, Walumbwa and Weber, 2009; Pearce, 2004); Substitutes for Leadership (Avolio, Walumbwa and Weber, 2009; Keller, 2006); Servant Leadership (Avolio, Walumbwa and Weber, 2009; van Dierendonck, 2011); Cross-cultural Leadership (Dickson, Den Hartog and Mitchelson, 2003; Javidan *et al.*, 2006a); Ethical Leadership (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005); Leadership as Practice (Carroll, Levy and Richmond, 2008); Charismatic Leadership (DeGroot, Kiker and Cross, 2000; Gardner *et al.*, 2005); and Implicit Leadership Theory (Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). For that purpose, this study considers leadership as: *any intentional behaviour a leader or an employee temporarily assuming leadership exercises to influence others, directly or indirectly, with the purpose of realising the organisation’s intentions, aims and objectives.*

Furthermore, the reviews considered a range of leadership outcomes also to be under the influence of context. Hence, this thesis' theory development process considered contextual factors influencing Organisational Citizenship Behaviour (OCB) (Ehrhart, 2004; Piccolo and Colquitt, 2006); LMX Quality (Cogliser and Schriesheim, 2000; Wang *et al.*, 2005); Followership (Avolio *et al.*, 2004a; Uhl-Bien *et al.*, 2014); Teamwork (Salas, Sims and Burke, 2005); Collaboration (Bell and Kozlowski, 2002; Patel, Pettitt and Wilson, 2012); Adaptive performance (Martins and Terblanche, 2003; Raisch and Birkinshaw, 2008); Task performance (Michie and West, 2004; Wang *et al.*, 2011); Organisational learning (Berson *et al.*, 2006; von Krogh, Nonaka and Rechsteiner, 2012); Counterproductive work behaviour (Dalal, 2005; Podsakoff *et al.*, 2006); Commitment and Cohesion (Dionne *et al.*, 2004); Trust (Schoorman, 2007); and Work Attitude (Hiller *et al.*, 2011).

From this position in the literature, the next chapter introduces the conceptual framework. As the chapter will display, it emerged through many iterations between the thematic analysis of the sixty reviews and consulting Critical Realism literature.

# Chapter Three

## 3. A conceptual framework for leadership context

The recognition that leadership is influenced by many interacting contextual factors, and plays out in complex open systems with influence from psychological, social, process and physical factors, is a trend in leadership research (Dinh *et al.*, 2014; Osborn, Uhl-Bien and Milosevic, 2013). This recognition, in conjunction with the patterns emerging through the content analysis of the sixty review articles, led to the application of Critical Realism as an analytic aid in the theory development. Critical Realism posits that social life operates in open systems and that studying the social world entails recognising this complexity (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). Critical Realism is a movement spanning the positivist and constructionist paradigms, arguing that a holistic understanding of the nature of the phenomena must guide the methodological choices (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). This focus on understanding the phenomena itself aligns well with suggesting a framework for leadership context, which is relevant across different leadership theories. The purposeful application of Critical Realism for interpretation of the emerging patterns in the reviewed literature allowed the development of eight propositions underpinning a framework for leadership context. In the following sections, the conceptual framework for leadership context is developed from the literature by discussing the eight propositions.

### 3.1 Causal powers are the keys to leadership context

The first two propositions discussed in this section relates to that a contextual factor holds causal powers, but that possessing causal powers does not necessarily entail manifestation (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). In Critical Realism, it is recognised that an object in itself possess causal powers, which, if triggered releases a mechanism bringing the causal power to have an effect on other structures and agents in the context (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). This suggests that leadership context can be delineated by focusing on the causal powers of the contextual factors.

It also implies that the criterion for including contextual factors in a leadership study is whether the causal powers hold the potential to influence either the leader, the followers, the process or other mechanisms which could influence the actors and the process (Archer, 2003; Danermark, Ekström and Karlsson, 2019). Underpinning this logic is a concept of intentional intervention guided by the desired outcome, which corresponds well with the leadership phenomenon. It implies that to understand leadership context; one must understand which outcomes leadership should produce. The importance of intentionality corresponds with a fundamental understanding of structure and agency, as formulated by Archer (2003): *“For anything to exert the power of a constraint or an enablement, it has to stand in a relationship such that it obstructs or aids the achievement of some specific agential enterprise”* (p. 5). The logic suggests that an essential part of leadership context is the organisational intention(s). Building on the logic summarised by Archer (2003), the following section elaborates on organisational intentions specifically for the leadership context.

### *3.1.1 P<sub>1</sub>: Organisational intentions and desired outcomes are vital to understanding the leadership context*

P<sub>1</sub> is the first proposition. An example of the importance of understanding the desired outcomes is found in the ambidexterity, exploration, and exploitation literature. Since March (1991) introduced the two modes of learning (exploration and exploitation), the importance of understanding how an organisation pursues value creation has increased (Benner and Tushman, 2003; Boumgarden, Nickerson and Zenger, 2012). Within this frame, a key question for a leader becomes whether the intention is to drive up efficiency by utilising existing knowledge, or it is to create new value with new knowledge or both in a balance (Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Boumgarden, Nickerson and Zenger, 2012; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008). Besides the focus on intention in the ambidexterity literature, leadership research has, for decades, highlighted the importance of direction setting (Bass and Bass, 2008). Much leadership theory has emphasised direction setting as a vital feature in effective leadership; for example in Transformational Leadership (Bass and Riggio, 2014), Exemplary Leadership (Kouzes and Posner, 2006), or in the Path-Goal Theory of Leadership (House, 1996). The focus on inspiring with a vision and setting direction in these leadership theories implies an underlying leader practice of understanding and translating the organisation's intentions.

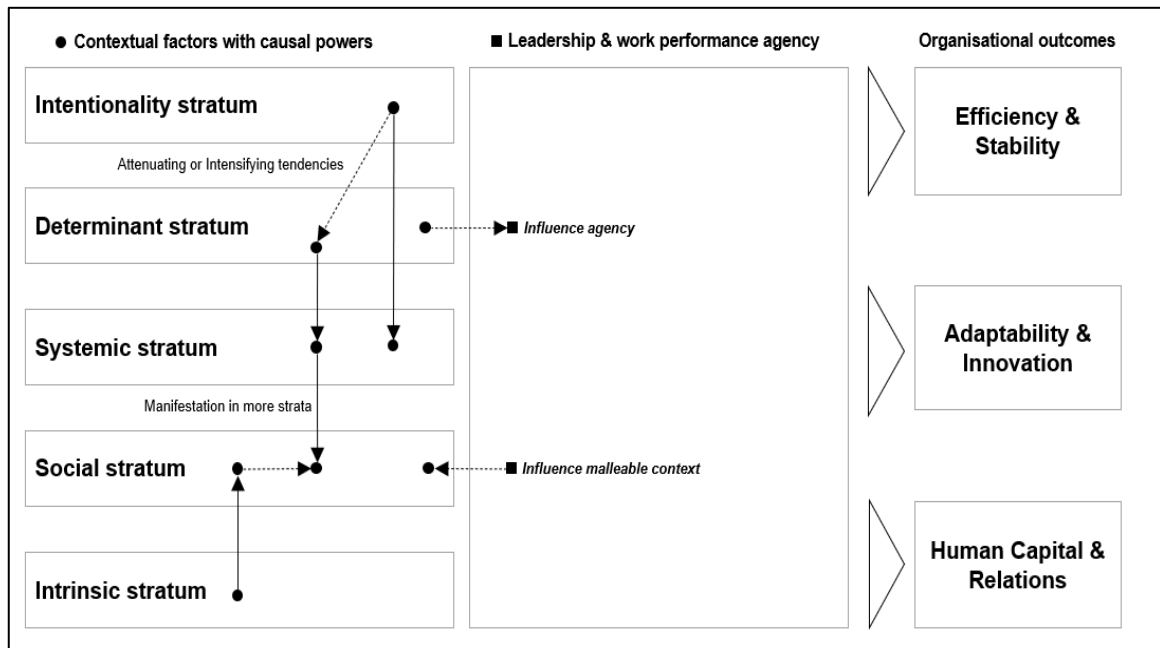
In support, the content analysis indicated that the desired outcomes of leadership converge towards the three categories of outcome determining the organisation's financial performance identified by Yukl in his 2008 article about "*How leaders influence organisational effectiveness.*" These categories are; i) *Efficiency and Stability*, concerning the extent to which an organisation minimise the cost of operating; ii) *Adaptation and Innovation*, concerning how well the organisation adapts to external changes and innovates; and, iii) *Human Capital and Relations*, which is the extent to which an organisation have the commitment, competences and collaboration needed to work effectively (Yukl, 2008). Supporting Yukl's (2008) categorisation of desired outcomes is a study linking the three performance categories to long-term financial prosperity in a sample covering ten years involving 104 Fortune 500 companies across 15 industries (Mahsud, Yukl and Prussia, 2011).

As contended by Yukl (2008; 2012), other authors also consider organisational effectiveness or performance as the desired outcome of leadership (e.g. Antonakis, Avolio and Sivasubramaniam, 2003; Dinh *et al.*, 2014) and as closely linked to specific leadership behaviour (e.g. Pawar and Eastman, 1997; Purvanova, Bono and Dziewieczynski, 2006). In the *Human Capital and Relations* category, some authors focus on organisational effectiveness as linked to Organisational Citizenship Behaviour (Ehrhart, 2004; Turnley *et al.*, 2003); as linked to high-performing culture (Chatman and Cha, 2003; Jung *et al.*, 2009); as linked to followership (Uhl-Bien *et al.*, 2014), or, as linked to employee attitudes and behaviours (Johns, 2006). In addition, many studies confirm that leadership influences *Human Capital and Relations* (e.g. Avolio *et al.*, 2004a; Cogliser and Schriesheim, 2000; DeGroot, Kiker and Cross, 2000; Podsakoff *et al.*, 2006). Also, the perspective that organisational effectiveness is fuelled from *Efficiency and Stability* on one side with *Adaptability and Innovation* on the other side is confirmed in the reviewed literature (Michie and West, 2004; Wang *et al.*, 2011; Wang *et al.*, 2005). In that vein, exploration, exploitation and ambidexterity research link leadership interventions to organisational outcomes corresponding with *Efficiency and Stability*, and *Adaptability and Innovation*, respectively (Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008).

These patterns led to the presupposition for the theory development that a leader should be influenced in the choice of leader behaviour by the organisational intentions and desired outcomes. It follows that the leader must understand the desired outcomes and the organisation's functioning resulting in *Efficiency and Stability*, *Adaptability and Innovation* or improvement of the *Human Capital and Relations*.

This provides the first building blocks in the conceptual framework for leadership context, see figure 3 below. The conceptual framework encompasses contextual factors ordered in strata; the manifestation dynamics; and the differing causal tendencies influencing agency related to the three organisational outcomes. The components and dynamics depicted in figure 3 are discussed in the following sections.

**Figure 3. Conceptual framework for leadership context**



Source: The literature-warranted conceptual framework

### 3.1.2 *P<sub>2</sub>*: Causal powers warrant the inclusion of contextual factors

Brown and Treviño (2006), who researched ethical leadership, provided an example of how a contextual factor's causal powers delineate leadership context. They report that in a moral-intensive context, wrong decisions can cause severe harm. Yet, this mechanism need not come into effect if other elements in the context, (e.g. rules, procedures, or technology) prevents the harm from manifesting. No matter if the harm manifests, the mere potential to cause harm is what defines the context as morally intensive. In a similar vein, in dangerous (Campbell, 2012) or extreme environments (Hannah *et al.*, 2009); the threat will not always manifest itself even though the threat is there, (i.e. the threat possesses the causal powers). Hence, the leader must lead as if the threat could manifest itself anytime. The context would still be considered dangerous, even though the temporary situation is not.



The examples illustrate how the causal powers of contextual factors allow a delineation of leadership context for a group of agents engaged in a leadership relationship; as a homogeneous sum of context factors with causal powers will comprise their leadership context (Danermark, Ekström and Karlsson, 2019; Luhmann, 1995). In turn, the heterogeneity to other agents, who are not potentially influenced by the same sum of context factors, indicates that multiple leadership contexts within an organisation can exist (Luhmann, 1995); always tied to agents, but at the same time distinct from these agents. Consequently, a leader can exercise leadership in multiple leadership contexts delineated by the agents participating. To exemplify, the leadership context changes when: i) the same leader leads different employees physically near or at a distance (Antonakis and Atwater, 2002; Bell and Kozlowski, 2002; Hoyt and Blascovich, 2003); ii) leads those pursuing exploration and those pursuing exploitation (Jansen, Van den Bosh and Volberda, 2006; Vera and Crossan, 2004); or, iii) leads those in harm's way and those supporting them from safety (Campbell, 2012; Hannah *et al.*, 2009). Nevertheless, large parts of the leadership context remain the same when these employees in different departments are part of the same organisation.

In the leadership literature, context is mostly drawn into leadership research as moderator or mediator variables (Klimoski, 2012; Porter and McLaughlin, 2006). This was confirmed in the literature review. For example, a moderating effect on the relationship between leadership and outcomes, such as spatial distance moderating the effect of communication (Bell and Kozlowski, 2002; Patel, Pettitt and Wilson, 2012). Another example is a moderating influence on the desired outcomes of leadership, such as work climate or job characteristics directly influencing job performance behaviour (Ehrhart, 2004; Viswesvaran and Ones, 2000). Also, mediating effects, for example, trust mediating between leader interventions and employee performance (Avolio and Gardner, 2005; Gardner *et al.*, 2005) were confirmed. However, also choice-guiding effects were identified, for example, a dangerous environment guiding the choice of certain decision-making practices (Campbell, 2012; Hannah *et al.*, 2009). Finally, compensating contextual effects emerged, such as procedures substituting for leadership (Howard-Grenville, 2005; Jermier and Kerr, 1997; Kerr and Jermier, 1978).

Another approach to determining which contextual factors to include is the attention to *Levels of Analysis* which is an inherent challenge in studying leadership and its outcomes, often addressing one or more of the levels: individual, dyad, team/group, work unit, organisational unit, organisation/firm (e.g. Berson *et al.*, 2006; Cogliser and Schriesheim, 2000; DeGroot, Kiker and Cross, 2000; Hiller *et al.*, 2011; Raisch and Birkinshaw, 2008; Wang *et al.*, 2011).

Underpinning the level of analysis discussion is an assumption that leadership is studied in an organisational context where a role holder, permanent or temporary, influences followers (Osborn, Uhl-Bien and Milosevic, 2013). Hence, the organisational design naturally guides the definition of the context relevant to include as the placement of the role holder and followers in the organisation guides the choice of level of analysis, thus defining the context of interest (Osborn, Uhl-Bien and Milosevic, 2013). The individual level of analysis emerges because of attention to leadership outcomes, that is, how followers' personality, expertise level, and values influence their response to leadership interventions. For example, Tett and Burnett (2003) investigated how personality is expressed as valued work behaviour finding that the intrinsic 'context', i.e. trait settings, influence how leadership interventions convert into work behaviour. Also, Purvanova, Bono and Dzieweczynski (2006) investigated leadership's direct influence on citizenship performance, but also employees' perceptions of job complexity's influence on citizenship performance. In sum, for the theory development, it is assumed that the inclusion of contextual factors should be warranted by causal powers to influence leadership or work performance, or both. Next, the emerging patterns of interaction between agents and context are considered as the third, fourth and fifth propositions underpinning the theory development.

### **3.2 Context and agents interact**

The third, fourth and fifth propositions concern how leadership manifests itself in an open system. An open system where agents, organic and inorganic elements together produce mechanisms resulting in outcomes which will vary while at the same time maintaining some stability in the way the interaction of factors play out (Archer, 2003; Bhaskar, 2018; Luhmann, 1995). It implies that leadership context is inseparable from the social system of interest (the leadership phenomenon), while paradoxically it can be considered a subsystem in its own right (Danermark, Ekström and Karlsson, 2019; Luhmann, 1995; Morgan, 1997). In the leadership context, the actors will create interpretations, individual and shared, allowing them to act on the interactions between the wider environment and the leadership context (Luhmann, 1995). The interpretations take place through dialogue, perception and cognition, allowing the actor to place herself relative to a cognitive map permitting an understanding of how to act in response (Schreyögg and Sydow, 2010). These ongoing interpretive processes entail a fluidity of leadership context with an ongoing reproduction of the boundaries of leadership context (Schreyögg and Sydow, 2010).

On the one hand, organisations cannot function effectively without shared schemes to understand the complexity of the world in which they operate (Luhmann, 1995). On the other hand, the fluidity entails that the interpretivist nature of perceiving what is going on and aligning perceptions with others in the social system needs to be recognised (Schreyögg and Sydow, 2010). Related to the shared schemes stressed by Luhmann (1995) as vital for effective organisational functioning is the social identity of the agents interacting in the context. When agents interact with the context and other agents, an individual and collective social categorisation process creating prototypes stipulating expected behaviour occurs (Gardner et al., 2005; Hogg, Van Knippenberg and Rast, 2012b; Uhl-Bien et al., 2014). The prototyping processes taking place between and within agents build a collective self within each member, influencing expectations to and enactment of leadership and work performance behaviour (Hogg, Van Knippenberg and Rast, 2012b). The more in line with the shared prototypical behaviour a member acts, the more influence, hence leadership, the member can exercise due to matching the social identity embedded with the other members (Gardner et al., 2005; Hogg, Van Knippenberg and Rast, 2012b). Over time, this creates an in-group comprising the members sharing the same prototypes reinforcing the behavioural convergence, which further strengthens the collective self (Hogg, Van Knippenberg and Rast, 2012b). Besides the in-group's importance of social identity to leadership context, also the shared schemes of intergroup relational identity in an organisation are part of the leadership context created by the agents involved in cross-boundary collaboration (Hogg, Van Knippenberg and Rast, 2012b). The collective self, the in-group and intergroup formation, is influenced through sense-making, allowing self-categorisation (Hogg, Van Knippenberg and Rast, 2012b; Maitlis, 2005; Uhl-Bien et al., 2014).

Further corroborating the duality between a need for shared schemes to function as an organisation (Luhmann, 1995) and the ongoing interpretation and recreation of social structures (Archer, 2003; Schreyögg and Sydow, 2010) is language. Language influences the individual and shared discourses and sets boundaries for the actor's opportunity to participate in shared sense-making (Jepson, 2010; Maitlis, 2005). Hence, there is a need for reliable shared frames of reference, i.e. a language to talk about the context in conjunction with a process that engages the actors' interpretations in shared sense-making (Jepson, 2010; Maitlis, 2005; Schreyögg and Sydow, 2010). As a distinct subsystem delineated by the contextual factors' causal powers, as discussed above, leadership context reproduces its structures through the actors' repeated agency (Archer, 2003; Danermark, Ekström and Karlsson, 2019; Luhmann, 1995).

Together, this suggests that objective and subjective structures exist; that agents exist; that structures precede agency; that agency can reproduce or change structures; that the flux between shared schemes and interpretation makes context somewhat fluid (Archer, 2003; Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019; Gorski, 2013; Jepson, 2010; Maitlis, 2005; Schreyögg and Sydow, 2010). From the recognition of the existence of both objective and subjective structures follows that external reality exists independently of our conceptions of it; and that socially construed reality also exists and exercises an influence on the agency (Archer, 2003; Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019; Gorski, 2013). Consequently, people chose what they do and how they go about it, following the meaning they ascribe to their world. That is, they act from their cognitive, emotional and embodied map of the world, yet under the influence of the social structure in which they act (Archer, 2003; Danermark, Ekström and Karlsson, 2019; Hays, 1994).

### 3.2.1 *P<sub>3</sub>: Context can help or hinder the agency*

In leadership, both leaders and followers experience a range of concrete and objective contextual factors which can help or hinder their work behaviour, collaboration, and leadership. For example, factors that can help or hinder leadership and work behaviour such as task interdependence (Morgeson and Humphrey, 2008), spatial distance (Bell and Kozlowski, 2002) or formalised standards (Howard-Grenville, 2005). Simultaneously, a range of less tangible factors, just as real in everyday life, exercise an influence which can be conducive to leadership and work performance or hinder it, if at a low level. For example, team cohesion (Dionne *et al.*, 2004), participative safety (Shalley and Gilson, 2004) or openness to new ideas (Berson *et al.*, 2006). For some of the less tangible factors, there are multiple levels in their emergence; especially apparent in cultural research, where measuring the underlying values versus measuring experienced practices is a long-standing discussion (Denison, 1996; Javidan *et al.*, 2006b; Patterson *et al.*, 2005). In the GLOBE project, both the value level and the practice level is measured (GLOBE, 2019), and in climate research, both the individual psychological climate and the aggregate organisational climate is often measured (Patterson *et al.*, 2005). The assumptions behind the discussions are that values guide behaviour. Although they do not solely determine behaviour and practices, different underlying values can result in behaviour that helps or hinders the organisational endeavour (Denison, 1996; Javidan *et al.*, 2006b; Patterson *et al.*, 2005).

Relatedly it is essential to consider language as the vehicle for addressing how these values manifest themselves into behaviour (Trompenaars and Hampden-Turner, 2012). In that respect, the GLOBE project has been criticised for not considering the value-laden character of different languages in the development and application of the GLOBE framework (Jepson, 2009). This interpretivistic perspective raises the point that when it comes to uncovering causal effects from contextual factors, language is imperative as a transmitter of meaning (Jepson, 2009). Together, it supports a recognition that both subjective and objective context and the language as a value-laden transmitter of meaning matter as all three possess causal powers and represent structures influencing agency (Archer, 2003; Hays, 1994, Jepson, 2009). Another significant contribution in understanding how structure and agency interact is the research into Substitutes for Leadership (Kerr and Jermier, 1978). The core ideas of the substitutes for leadership theory are that: i) leadership influences followers through structural, technological and other impersonal processes, and ii) the climate among followers substitutes leadership (Jermier and Kerr, 1997). In support, Keller (2006), in a five-year longitudinal study of 118 research and development project teams across five companies, confirmed that some substitutes for leadership (Kerr and Jermier, 1978) and initiating structure (Bass, 1985) positively influenced team performance. Together, for the theory development, it is assumed that contextual factors hold the causal powers to exercise a helping or a hindering effect on the agency. It also indicates that some of these factors themselves are malleable while others are not. In the following section, we investigate the malleable context further.

### ***3.2.2 P4: Agency can influence the malleable context***

In the culture literature, a widely accepted assumption is that culture results from shared learning of a group as it adapts to the external world and finds its way of internal integration (Schein and Schein, 2017; Schneider, Ehrhart and Macey, 2013). This asserts that material and ideal structures are mediated through agency which over time consolidates into durable structures (Archer, 2003; Bhaskar, 1998). However, the durability is determined by repeated enactment by agents, who thereby reproduce the structure (Archer, 2003; Hays, 1994). One crucial aspect signifying how the agency can influence malleable context is that leaders engage in sense-giving and members in sense-making (Maitlis, 2005), with the leader attempting to influence followers' beliefs and behaviours. Johns (2006) posited that social contextual factors could influence deeper levels of sense-making, influencing performance and well-being.

In line with Johns (2006), research into sense-giving and sense-making indicate that subjective context is to an extent shapable (Maitlis, 2005). Indeed, cultural research confirms that this, in turn, can influence manifestations in the behaviour of organisational members (Javidan *et al.*, 2006b). In this vein, it is worth noting that sense-making always takes place; meaning that inappropriate leadership or counterproductive work behaviour can hinder performance through the emergence of a climate unhelpful to performance (Dalal, 2005; Podsakoff *et al.*, 2006). Further to the recognition that structure and agents are separate but related, Dinh *et al.* (2014) analysed the complexity theory of leadership (Uhl-Bien, Marion and McKelvey, 2007) and the theory of leadership for organisational learning (Berson *et al.*, 2006; Vera and Crossan, 2004), and emphasised some noteworthy central assertions supporting the understanding how agency can influence malleable context.

Firstly, the leader enables performance and learning by shaping the organisational structures, processes and conditions. That is, increase or decrease systemic contextual factors, such as centralisation or formalisation. Secondly, leadership outcomes are shaped by multilevel social-environmental dynamics; which thirdly can be influenced by leader behaviour; and which fourthly, in turn, influences leadership (Dinh *et al.*, 2014). Dinh *et al.* (2014) emphasised the socialisation processes in the emergence of work climate and the repeated enactment of leader behaviour influencing this emergence; a dynamic also supported when discussing emergence and reproduction in climate research (Dragoni, 2005; Schneider, Ehrhart and Macey, 2013). The focus on the socialisation processes, which is naturally inseparable from people, implies that another opportunity to shape context is to change staff composition (Michie and West, 2004). In an early study focused on context and its influence, Ghoshal and Bartlett (1994), identified that shaping the organisational context to promote work performance is a central managerial task, clarifying that *“management action is embodied in context, both as its shaper and as its outcome”* (p. 104). Later, Raisch and Birkinshaw (2008) built on Ghoshal and Bartlett (1994) and argued for the importance of strengthening context to enable exploration, exploitation and doing both, i.e. ambidextrous capacity. Other authors concur that the leader should strengthen context to promote the organisational intentions (Denison, 1996; Dragoni, 2005). In sum, the theory development will build on the assumptions that leadership agency can increase or decrease some systemic contextual factors; strengthen the emergence and reproduction of malleable social factors; and change staff composition in the leadership context. Conversely, it follows that there are also contextual factors exercising causal effects, which cannot be influenced by leadership agency, but only mitigated.

### 3.2.3 *P<sub>5</sub>: Agents can choose behaviour that mitigates the effects of contextual factors*

Reversing the rationale behind the Substitutes for Leadership theory (Howard-Grenville, 2005; Jermier and Kerr, 1997; Kerr and Jermier, 1978) suggests that leadership agency can compensate for lack of processes and procedures. As discussed above, the leader can strengthen malleable context to mitigate the effects of a lack of supporting processes. However, the leader or a team member can also mitigate the effects through their agency. Examples are: i) when a leader's increased communication mitigates the effect of threat (Campbell, 2012); or, ii) when ethical role modelling from a leader mitigates the effects of high moral intensity (Brown and Treviño, 2006).

In continuation, iii) when the effects of a state of crisis are mitigated through the leader's attention pattering (Osborn, Hunt and Jauch, 2002); or, iv) when a leader mitigates the harmful effects of distance with increased direction setting and structuring behaviour (Bell and Kozlowski, 2002). Further highlighting the importance of attention to the mitigative agency is the recognition that certain parts of a leadership context cannot be shaped by the leader (Johns, 2006). The power to change structures depends on the actor's capacity to mobilise resources and apply these in the influencing process, be that other people, time, knowledge, skill, trust, relations or authority (Danermark, Ekström and Karlsson, 2019; Howard-Grenville, 2005). This implies that some factors are more determinant, which cannot be changed within the leader's mandate but only mitigated by strengthening other contextual factors or through agency. For example, competitive intensity (Lavie, Stettner and Tushman, 2010); external threat (Hannah *et al.*, 2009); or distance (Antonakis and Atwater, 2002). As these examples indicate, it is assumed in the theory development that leadership holds power to mitigate some contextual factors' negative effect by choosing the most appropriate leadership behaviour from their leader behaviour range. Also, that leadership can indirectly mitigate negative contextual effects from one factor by intervening to influence other malleable contextual factors.

## 3.3 Leadership context is layered

Critical Realism contends that reality is stratified and that there are for example psychological and social strata, person and organisational strata, or structure and agency strata (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014).

The sixth proposition rests upon the identification of a stratified reality in the literature reviewed. As discussed previously, explanatory power stems from understanding the factors and their causal powers, but also from understanding how the different entities relate to the whole (Bhaskar, 2018; Edwards, O'Mahoney and Vincent, 2014). The emphasis on the importance of understanding the 'wholeness' (Bhaskar, 2018; Edwards, O'Mahoney and Vincent, 2014) challenges the widespread reductionism in leadership research as to the inclusion of contextual parameters (Porter and McLaughlin 2006). A concept of a 'laminated system', which posits that different layers can be made up by both social and physical systems, which must be considered together to achieve explanatory power is part of this layering-proposition (Bhaskar, 2018; Danermark, Ekström and Karlsson, 2019; Gorski, 2013).

### **3.3.1 P<sub>6</sub>: Leadership context is layered in five strata**

In opposition to much organisational leadership research, cross-cultural leadership research has had context as the central variable of interest, while the agency has served to identify relevant contextual variables. This has led to a fuller investigation of all contextual factors with an influence, than in much leadership research (Dickson, Den Hartog and Mitchelson, 2003; Hofstede, 1980; Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). Only recently, the research turned to focus on which type of leadership is then effective given the context (GLOBE, 2019), that is, the guiding-choice effect discussed under proposition #1. Even though Hofstede's (1980) original IBM study and the GLOBE project have differences in how they conceptualise culture (Javidan *et al.*, 2006b), they share an understanding that context is multi-layered. That is, the contextual understanding differentiates between values, intrinsically held by the individual, and practices, socially held in the observed behaviour of the organisation or society of which the actor is part (GLOBE, 2019; Javidan *et al.*, 2006b). A similar assumption is found in the climate-culture discussion where after many years of debate, an understanding that climate and organisational culture pertains to the same phenomena, only at different levels, has emerged (Denison, 1996; Jung *et al.*, 2009; Schneider, Ehrhart and Macey, 2013). The widespread support for a multi-layering of context was cemented by Schein, who in 1985 introduced a three-layered model of organisational culture (Schein and Schein, 2017). Schein and Schein (2017) posited that to get an overview of a culture, it is necessary to use a conceptual map of culture to bring order to complexity. Schein and Schein (2017) laminate reality based on "*the degree to which the cultural phenomenon is visible to you as participant or observer*" (p. 18), confirming the multi-layering assumption originating from Hofstede (1980).



Schein and Schein (2017), in line with Denison (1996) consider climate to be at the visible artefactual level and place policies, processes, organisational structure and all other observable objects, including behaviour, at this level. The middle level pertains to socially validated espoused norms, rules and beliefs, (i.e. the explicitly articulated "ways we do things around here"). The deepest level is the overlap in the mental maps held by members concerning fundamental, typically unconscious, assumptions that guide how things should be perceived, interpreted and felt about, and, which guide the behavioural manifestations such as decision making, collaboration, and leadership (Schein and Schein, 2017). One interesting observation in Schein and Schein's work is their definition of culture, which is "*the accumulated shared learning of a group as it solves its problems of external adaptation and internal integration....*" (2017, p. 6). This definition indicates that to understand culture, you must understand the contextual factors that foster external adaptation, resembling the requisite variety argument also underpinning complexity theory in leadership research (Osborn, Hunt and Jauch, 2002; Uhl-Bien, Marion and McKelvey, 2007). Relatedly, the requisite variety is also recognised in the climate-culture research (Schneider, Ehrhart and Macey, 2013) and other parts of the cross-cultural research (Javidan *et al.*, 2006b). Together, the multi-layering in the climate and culture research in conjunction with the content analysis of the literature suggests the existence of five strata in the conceptual framework for leadership context, as illustrated in figure 3.

Firstly, following proposition #1, is a layer of **organisational intentionality** comprising what the organisation tasks the leader to achieve through their leadership, exercising a guiding-choice influence. For example, intentions to explore or exploit (Benner and Tushman, 2003; Lavie, Stettner and Tushman, 2010), or increase the quality of the human capital to enable performance (Patel, Pettitt and Wilson, 2012). Next, proposition #2 suggests that from the individual to the organisational levels of analysis, there are factors outside the organisational members' control, which can influence leadership and work behaviour, here termed **determinant structures**. For example, danger (Campbell, 2012); the moral intensity of issues faced (Brown and Treviño, 2006); or spatial distance (Antonakis and Atwater 2002; Bell and Kozlowski 2002). Furthermore, proposition #2 suggests that there is a layer of unchangeable and changeable contextual factors within the level of analysis comprising observable **systemic structures** with the causal powers to influence leadership and work behaviour at all levels of analysis. Examples are: resource availability and allocation (Lavie, Stettner and Tushman, 2010); task complexity (Marta, Leritz and Mumford, 2005); or, task interdependence (Morgeson and Humphrey, 2008).

By the same token, proposition #2 warrants that at all levels of analysis, there is a layer of more malleable contextual factors within the level of analysis comprising observable **social structures** influencing leadership and work behaviour. For example, contextual factors such as safety climate (Schneider, Ehrhart and Macey, 2013); justice climate (Ehrhart, 2004); or, climate for learning (Dragoni, 2005) influencing leadership and work behaviour. Finally, following proposition #2, a layer of intrinsically held contextual factors exist with the powers to influence leadership and work behaviour, here termed **intrinsic structures**. In this stratum, examples are the individualism settings among team members (Javidan *et al.*, 2006b); the uncertainty avoidance levels with the team members (Dickson, Den Hartog and Mitchelson, 2003); worker knowledge and skills (Morgeson and Humphrey, 2008); and the diversity in such intrinsic settings in the team (Mannix and Neale, 2005).

The discussion above indicates, that an object will reside in one stratum, but could have causal powers in other strata (Danermark, Ekström and Karlsson, 2019) as illustrated in figure 3. We now turn to investigate these interactions in more depth.

### 3.4 Contextual factors interact

The seventh and eighth propositions that emerged pertain to that mechanisms from contextual factors in different strata operate simultaneously; some reinforce each other, while others are counteracting (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). Danermark, Ekström and Karlsson (2019) posit that events are *“complex compound effect of influences drawn from different mechanisms, where some mechanisms reinforce one another, and others frustrate the manifestations of one another”* (p. 47). Hence, whether a causal power is triggered depends on the existing conditions, and if triggered, the effect of its causal powers depends on the other factors operating in the context (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). As reality is stratified, it is recognised in Critical Realism that entities that exist in different layers can influence each other and that one cannot understand the whole by reducing it to its parts (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014). Furthermore, that a factor at a higher level is not necessarily determined by factors at lower levels or vice-versa. That means that different layers can have factors with unique causal powers, which can be relatable or unrelatable to the factors in the other strata which exercise influence on the same social structures or agents (Danermark, Ekström and Karlsson, 2019; Edwards, O'Mahoney and Vincent, 2014; Gorski, 2013). See figure 3.

### 3.4.2 P7: *Attenuating and intensifying effects create a balanced tension system*

Further to the understanding of how the contextual factors interact Johns (2006) built upon the concept of *situational strength* (Mischel, 1968 in Johns, 2006) suggesting a definition of context as "*situational opportunities and constraints that affect the occurrence and meaning of organisational behaviour as well as functional relationships between variables*" (p. 386). Antonakis et al. (2003), who investigated how context influence leadership, also built upon *situational strength* (Mischel in Antonakis, Avolio and Sivasubramaniam, 2003) to posit that strong context may support the emergence of aligned behaviour among members, while weak contexts may result in a higher variation in work behaviour.

Johns (2006) discussed the capacity of a context to aid or constrain human agency in a tension system or *force field* (Lewin, 1951 in Johns, 2006) and the difficulties of foreseeing how small changes in a balanced tension system will play out. To advance this understanding, Howard-Grenville's (2005) research, who investigated routine 'embeddedness', is helpful. Organisational routines play a critical enabling role in organisational performance by enhancing coordination of efforts between multiple actors, directing focus to organisational priorities and increasing operational efficiency (Howard-Grenville, 2005). A routine's 'embeddedness': its overlap, interlock and alignment with other processes, culture or technological structures; and its centrality to the group's work is found to be central in understanding a routines persistence (Howard-Grenville, 2005). Weak embeddedness of a routine is found when it overlaps with few other structures; the overlap is relatively insignificant; and, competing artefacts and expectations exist. Strong embeddedness exists when there are many, significant and consequential overlaps; many reinforcing artefacts; and well-aligned expectations exist (Howard-Grenville, 2005).

The embeddedness concept also occurs in cross-culture research to explain the value overlap among people in a given culture (Dickson, Den Hartog and Mitchelson, 2003), which amplify that the embeddedness phenomenon permeates all strata. Furthermore, weak embeddedness resembles fragmentation in climate and culture research (Schneider, Ehrhart and Macey, 2013), and links to the importance of leadership focus and consistency in shaping consistent perceptions of a climate in a workgroup (Dragoni, 2005). This implies that the embeddedness-fragmentation concept (Dickson, Den Hartog and Mitchelson, 2003; Howard-Grenville, 2005; Schneider, Ehrhart and Macey, 2013) rests upon the assumption that the values, routines and practices are directed towards the same intended purpose or outcome, further corroborating proposition #1.

Hanna et al. (2009) operationalised the inter-factor dynamics in their framework for examining leadership in extreme contexts by introducing the terms *Attenuators* and *Intensifiers*. Warranted by extant literature, Hannah et al. (2009) reported how a range of contextual factors act in concert to attenuate the effect of another contextual factor - threat. Examples of contextual factors with attenuating or intensifying powers influencing the effects of threat are: i) the individual level and collective efficacy; ii) empowered organisational forms; and iii) access to tangible, relevant resources (Hannah *et al.*, 2009). Moreover, they reported that complexity stemming from external factors (determinant strata) could intensify the effect of threat while complexity in the social or systemic strata arising from competing priorities or authority conflicts can intensify the consequences of threats (Hannah *et al.*, 2009). Together, this implies that understanding the tension system rests upon understanding the attenuating and intensifying powers of contextual factors directed towards other factors, see figure 3. Further to the understanding of the leadership context as a balanced tension system is the strength of climates in the social stratum, discussed in the following section.

#### 3.4.3 **P<sub>8</sub>**: *Climate strength comprise expectation-, enactment-, alignment- and agreement-based strength*

Kuenzi and Schminke, who in 2009 reviewed the climate and culture literature, found three features of climate important to understand related to leadership context. First, 1) climate is perceptual; it is rooted in individual perceptions, but a property of the collective; and, 2) it is distinct from culture as it reflects the sharedness of members' perception of the organisational practices, policies, and procedures (Kuenzi and Schminke, 2009). Moreover, 3) organisational climates are differentiated from psychological climates as the former is shared by a group of organisational members, while the latter resides with the individual (Dragoni, 2005; Ostroff and Schulte, 2014). The psychological climate is antecedent to organisational climate (Dragoni, 2005), which, in turn, explain why the level of agreement among the members is a crucial property of organisational climate strength (Patterson *et al.*, 2005; Schneider, Ehrhart and Macey, 2013). The term 'climate' will hereafter refer to organisational climate (shared) unless explicitly stated as the psychological climate. A closer look at how significant authors consider climate (Kuenzi and Schminke, 2009; Ostroff, Kinicki and Muhannad, 2012; Patterson *et al.*, 2005) reveals that they view agreement among agents as a vital strength-dimension. Agreement is considered in two parts; first agreement about the perceptions of the *expectations* expressed in for example policies, procedures, rules, codes of conduct; and second, agreement about which enactment of practices should be rewarded and supported.

This distinction seems vital to leadership context as the leader engages in sense giving, i.e. clarifying expectations, and the members in sense-making, i.e. interpreting which practices should be enacted (Maitlis, 2005). Furthermore, several authors support the importance for the leader in strengthening climates conducive to the desired leadership outcomes by expressing expectations and subsequently promoting desired enactment (Denison, 1996; Dinh *et al.*, 2014). The social identity processes discussed earlier further corroborates the importance of the agreement-based strength when it comes to enactment of practices. The stronger the group prototype norm is, the more it will influence the self-categorization process and make members of the group act in accordance (Gardner *et al.*, 2005; Hogg, Van Knippenberg and Rast, 2012b; Uhl-Bien *et al.*, 2014). However, the social identity processes also highlight that agreement-based strength on the enactment side must be considered together with agreement-based strength on the expectation side. The reason is that when leadership is enacted to realise organisational goals, the leader must critically assess if the prevailing social identity is conducive to the organisational intentions. Hence, the leader should be active in consolidating the desired art of the existing group prototype and shaping the parts that hinders effective functioning (Gardner *et al.*, 2005; Hogg, Van Knippenberg and Rast, 2012b; Uhl-Bien *et al.*, 2014). Other authors concur and stress the importance for leaders to both intervene directly with behavioural guidance, as well as shaping rules, regulations, procedures to be fit for purpose (Denison, 1996; Dragoni, 2005; Howard-Grenville, 2005; Raisch and Birkinshaw, 2008). Finally, even though the climate is distinct from culture (Kuenzi and Schminke, 2009), a similar socialisation mechanism occurs when a leader espouses values and calls out behaviour accordingly (Denison, 1996; Javidan *et al.*, 2006b; Patterson *et al.*, 2005). Further indicating the relevance of a distinction between perceptions of expectations and enactment, Ostroff, Kinicki and Muhannad (2012) introduced system-based strength as concerning a) the internal consistency of practices (enactment), and 2) the intensity to which employee behaviours are '*expected to be in accordance*' with the expectations (p. 665). Ostroff, Kinicki and Muhannad (2012) introduced the term 'tightness of the culture' concerning tolerance to deviations from norms, which relates to the enactment, and implicitly builds on the assumption that such norms, i.e. expectations, are clear and shared by the members. Also, Ostroff, Kinicki and Muhannad (2012) introduced alignment-based strength, which pertains to two dimensions: the alignment between the underlying values (intrinsic stratum), espoused values and climate; and, the alignment between the systemic established rules, regulations, policies and procedures (systemic stratum) and the climate (social stratum) (Ostroff, Kinicki and Muhannad, 2012).

As discussed above, there is widespread support to that strong contexts exercise more influence than weak contexts (Johns, 2006; Johns, 2017; Judge and Zapata, 2015; LePine *et al.*, 2002b; Meyer, Dalal and Hermida, 2010; Schneider, Ehrhart and Macey, 2013). Together, the theory development herein presupposes that a climate's strength is a sum of expectation-, enactment-, alignment- and agreement-based strength as summarised in table 2 below. Moreover, in line with proposition #4, that a leader can strengthen a climate by influencing the four strength-dimensions. For further insight, also see the Endnotes for a study by Kaptein (2008) corroborating the conceptualisation<sup>i</sup>.

**Table 2. Summary of the strength concept**

Strength dimension	Definition
Expectation-based strength	The perceived level of clarity of the messages expressing expectations to behaviour and practices, i.e. the clarity of priorities, rules, regulations, procedures, policies, code of conduct, and other expectations.
Enactment-based strength	The perception of acceptable enacted behaviour and practices among members in the leadership context, including the leaders.
Alignment-based strength	The level of perceived alignment between 1) the messages expressing expectations to behaviour and practices, and 2) between expectations and enactment.
Agreement-based strength	The level of agreement among members in the leadership context regarding their perception of the expectation-, enactment-, and alignment-based strength.

Source: This Author's content analysis

As described in this chapter, the conceptual framework for leadership context emerged out of the iterations of reviewing the literature. Subsequently, it was used for organising an integrated literature review (Torraco, 2016) presented in the coming chapters. The integrated literature review aimed to enrich the conceptual framework into a theoretical framework (Easterby-Smith, Thorpe and Jackson, 2015). In turn, the theoretical framework formed the basis for theoretical generalisation (Easterby-Smith, Thorpe and Jackson, 2015; Danermark, Ekström and Karlsson, 2019) through a Delphi study. The following chapters' literature review is organised following the conceptual model starting with the organisational intentionality stratum and ending with the intrinsic stratum.

# Chapter Four

## 4. Organisational intentionality

As discussed previously three desired organisational outcomes of leadership was introduced by Yukl (2008) and emerged in the content analysis of the reviewed literature: Efficiency and Process Reliability (e.g. Benner and Tushman, 2003; Lavie, Stettner and Tushman, 2010), Adaptability and Innovation (e.g. Andriopoulos, 2001; Birkinshaw and Gibson, 2004), and Human Capital and Relations (e.g. Avolio *et al.*, 2004a; Hogg, Van Knippenberg and Rast, 2012a). The exploration and exploitation literature has advanced the understanding of the pursuit of exploitation corresponding to Efficiency and Stability (Yukl, 2008) and exploration corresponding to Adaptability and Innovation (Yukl, 2008). Moreover, Yukl's (2008) three categories resemble three categories in research on individual work performance (Koopmans *et al.*, 2011; Griffin, Neal and Parker, 2007), which also emerged in the reviewed literature. That is, Task performance (e.g. Piccolo and Colquitt, 2006; Viswesvaran and Ones, 2000), Adaptive performance (e.g. Berson *et al.*, 2006; von Krogh, Nonaka and Rechsteiner, 2012), and Contextual performance or Organizational Citizenship Behaviour (e.g. Dalal, 2005; Ehrhart, 2004). Together it confirms three clusters of leadership intentions, each spanning the individual to the organisational level; 1) Exploitation and Task Performance; 2) Exploration and Adaptive Performance; and, 3) Human Capital and Contextual Performance. Before investigating each of the three intentions, the dilemma embedded in organisational ambidexterity should be recognised (Birkinshaw and Gibson, 2004). Exploration and exploitation each have their own dynamics and demand different work performance and leadership behaviour (Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015). Consequently, when pursuing intentions simultaneously, an organisation must act ambidextrously (Probst, Raisch and Tushman, 2011; Raisch and Birkinshaw, 2008). Hence, a vital part of organisational ambidexterity is to be intentional in allocating resources, engaging in work performance behaviour and devoting leadership attention (Raisch and Birkinshaw, 2008; Lavie, Stettner and Tushman, 2010). The leader is facing a zero-sum game demanding trade-offs between leadership efforts when balancing between exploit, explore and human capital initiatives (Raisch and Birkinshaw, 2008). Within the resource constraints the leader must switch between leading to exploit and explore, while still maintaining focus on the antecedents for contextual performance (Denison, Hooijberg and Quinn, 1995; March, 1991; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011).

Further recognition of the importance of balancing the three intentions is indicated by the move from little attention to leadership in the organisational adaptation literature (e.g. Gibson and Birkinshaw, 2004; March, 1991; Vera and Crossan, 2004) towards stronger attention in the ambidexterity leadership research (e.g. Jansen, Vera and Crossan, 2009; Keller and Weibler, 2014; Rosing, Frese and Bausch, 2011). In the ambidexterity leadership literature, it is confirmed that exploration and exploitation each have their dynamics and is best supported by different contexts and leadership (Boumgarden, Nickerson and Zenger, 2012; Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015). In continuation, the work design literature confirms that understanding the organisational intentions and shaping the context to promote the related work performance behaviour is an integrated part of leadership. Morgeson and Humphrey (2006; 2008) reviewed the work design literature and developed an integrated work design framework of factors influencing work outcomes, see table 3. Morgeson and Humphrey (2008) reported empirical support for the factors' influence on desired outcomes of leadership such as attitudes, productive and counterproductive job behaviour. The work design factors relate to the intentions and exemplify how a leader needs to consider work design from a clear understanding of the intentions.

**Table 3. Work design factors**

1)	Job autonomy encompasses three elements: work scheduling autonomy; work methods autonomy; and, decision-making autonomy.
2)	Skill variety pertains to the needed used of different skills in the job.
3)	Task identity is the extent to which the job requires completion of entire end-to-end tasks offering visible outcomes.
4)	Task significance is the degree of substantial impact on other people's lives or work of other people in or outside the organisation.
5)	Feedback from the job is the extent to which a job's tasks in themselves provide timely and accurate performance feedback.
6)	Task variety is the requirement for the execution of numerous different tasks in the job.
7)	Job complexity is how many facets and how difficult the job is to perform.
8)	Information processing is the job's demands to focus on, process and manage information.
9)	Specialisation concerns the job's demands for specialised skills. It is different from task or skill variety as it relates to the depth of knowledge and skill needed in the job.
10)	Problem-solving is about the job's need for non-routine problem solving or idea generation.

Source: Morgeson and Humphrey (2006).



To further understand each of the three intentions guiding the optimal choices of leadership interventions, they are investigated in the following sections.

#### 4.1 Exploitation and Task Performance

The business aims of exploitation are to create stability, drive optimisation, alignment, minimise deviations and variations, and continuously improve to reach a high level of efficiency (Boumgarden, Nickerson and Zenger, 2012; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011). It involves a focus on short-term performance and on promoting discipline to reduce variation (Raisch and Birkinshaw, 2008). The reviewed literature confirms that organisational intention holds guiding causal powers. For example, Pawar and Eastman (1997) proposed that an organisation in efficiency-oriented functioning demands more transactional leadership. Another example is Michie and West (2004) who researched how context and people management influence psychological antecedents and behaviour among employees, resulting in exploitative performance, which in this case was patient care. Exploitation can be effective in both dynamic and stable environments (Jansen, Vera and Crossan, 2009; Rosing, Frese and Bausch, 2011). However, that intentionality interacts with other contextual factors is indicated by findings that exploiting in a more dynamic environment makes it more difficult to yield above-normal returns (Lavie, Stettner and Tushman, 2010). These findings indicate attenuating effects from external dynamism. In table 4 below, exploitation as a business intent is summarised.

**Table 4. Exploitation**

Exploitation	Refinement, development, and extension of existing operation building on known competences, business models, technologies, and ways of operating. The purpose of leadership is to increase organisational effectiveness to increase business performance.
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Adapted from Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Jansen Van den Bosh and Volberda, 2006; Jansen, Vera and Crossan, 2009; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015; Tushman and Benner, 2013.

The efficiency and stable performance underpinning exploitation correspond well with the outcomes of individual task performance (Jundt, Shoss and Huang, 2015; Rosing, Frese and Bausch, 2011).

Several authors in the reviewed literature highlight task performance as the desired outcome of leadership (e.g. DeGroot, Kiker and Cross, 2000; Podsakoff *et al.*, 2006; Turnley *et al.*, 2003). Task performance relates to the job-specific proficiency or in-role performance centred on the quantity and quality of the expected job outcomes (Campbell *et al.*, 1990; Griffin, Neal and Parker, 2007; Motowidlo, Borman and Schmit, 1997; Pulakos *et al.*, 2000; Viswesvaran, Ones and Schmidt, 1996). Also, related employee behaviours related to efficiency such as planning own work to meet deadlines; prioritising the important tasks; working efficiently to spend time and effort optimally are encompassed when it comes to task performance (Koopmans *et al.*, 2014; Koopmans *et al.*, 2012). Together the intention to pursue exploitation and task performance is defined in table 5, and the contextual effects warranted through the literature review summarised.

**Table 5. Theoretical Framework, Intentionality stratum. The intention to pursue exploitation and task performance.**

<b>Definition</b>	<b>H<sub>1</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>2</sub>: A leader can promote exploitation and task performance by influencing the relevant contextual factors that are possible to change within their leadership context</b>
The intention to optimise and increase organisational efficiency to sustain and improve business performance. Focus on promoting task performance to maintain, refine, develop and extend the existing operation building on known competences, business models, technologies, and ways of operating.	(Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Boumgarden, Nickerson and Zenger, 2012; DeGroot, Kiker and Cross, 2000; Jansen, Vera and Crossan, 2009; Pawar and Eastman, 1997; Podsakoff <i>et al.</i> , 2006; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015; Turnley <i>et al.</i> , 2003)	(Berson <i>et al.</i> , 2006; Lavie, Stettner and Tushman, 2010; Morgeson and Humphrey, 2006; Morgeson and Humphrey, 2008)

Source: Literature review.

Next, we turn to the intention to explore and promote adaptive performance.

## 4.2 Exploration and Adaptive Performance

Leading to explore aims at getting, testing and developing new ideas into feasible new business (Benner and Tushman, 2003; Boumgarden, Nickerson and Zenger, 2012). It encompasses leader behaviours aimed at exploring, experimenting, challenging status quo, rethinking assumptions and boundaries, driving ideas up the learning curve, and learning from taking new actions (Rosing, Frese and Bausch, 2011). An aim in leading for exploration is to increase the variation in employee behaviour (Rosing, Frese and Bausch, 2011); to develop adaptability among employees (Gibson and Birkinshaw, 2004); and to drive up the ability to absorb new knowledge (Raisch and Birkinshaw, 2008). Berson et al. (2006), who reviewed literature linking organizational learning and leadership illustrated the importance of understanding the intentions, as exploration and exploitation “*require different organizational contexts for support*” (p. 580). Shalley and Gilson (2004), who provided a review examining organizational contextual factors that can hinder or foster employee creativity, concurred that the intention to explore influence the choice of leadership behaviour. Shalley and Gilson (2004), found three themes important to promote an intention to explore: supportive work context, communicating creativity expectations, and patterns of interactions<sup>ii</sup>. Another angle to the importance of understanding intention came from Lavie, Stettner and Tushman (2010), who reviewed the literature on exploitation and exploration. Associating flexibility and change with exploration, and stability and inertia with exploitation Lavie, Stettner and Tushman (2010) reported the organisational challenges when an organisation with path dependence in one mode of learning attempts to assume the other mode in order to get different results. Implicitly, Lavie, Stettner and Tushman (2010) thereby support the importance to understand if the intention in the leadership context is in line with the path dependence or a change in the mode of learning is necessary. Further stressing the importance hereof Lavie, Stettner and Tushman (2010) conceptualised exploration and exploitation as opposite ends of a continuum, suggesting that any choice to move position on the continuum would be undermined by the antecedents like organisational structure, culture and resource allocations. Simultaneously, the successive movement from exploration towards exploitation as initiatives mature, and the need to infuse exploration into ongoing exploitative operations were reported as part of a natural cycle of exploration-exploitation in an organisation (Lavie, Stettner and Tushman, 2010). The exploration intentions are summarised in table 6.

**Table 6. Exploration**

Exploration	Exploration of future business platforms through innovation and experimentation building new business models by applying new competencies, technologies and ways of working. The purpose of leadership is to build the foundation for future business outside the current business or disrupt and rethink existing operations.
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Adapted from Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Jansen, Van den Bosh and Volberda, 2006; Jansen, Vera and Crossan, 2009; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015; Tushman and Benner, 2013.

Considering that the exploration-exploitation balance change over time underlines the importance for leaders to understand the evolving leadership intentions, as a leader should lead towards a future vision, not just administer the current state (Yukl, 2013). By highlighting the importance of identifying the path dependencies reinforcing the dominant activities and changing them when necessary Lavie, Stettner and Tushman (2010) point to a vital link between intentions and leadership; the need for leading change. Leading through change is well recognised as a distinct theme within leadership (Dinh *et al.*, 2014), and that the leader understands the change context is a key to exercise effective leadership through change (Higgs and Dulewicz, 2016; Dulewicz and Higgs, 2005). The path dependence (Lavie, Stettner and Tushman, 2010) resemble a stable context where it is 'business as usual' (Higgs and Dulewicz, 2016). Interestingly, both a deliberate choice to pursue exploration or a response to a change from the external environment can change the 'business as usual' equilibrium (Boumgarden, Nickerson and Zenger, 2012). In either case, it can result in significant change demands to selected aspects of how the organisation operates; or, it can trigger more transformational change demands, which entails major widespread changes to the core business model (Higgs and Dulewicz, 2016). The different levels of change intentions demand different leadership ranges (Higgs and Dulewicz, 2016; Dulewicz and Higgs, 2005), which in turn, emphasise the importance of recognising intentionality in the leadership context.

Exemplifying how exploration looks like when enacted in an organisation, von Krogh, Nonaka and Rechsteiner (2012) refer to extant studies which found team behaviours like raising ideas; interpreting together; questioning assumptions; formalising their knowledge and building upon it; and discussing pressing issues, problems and ideas. These behaviours resemble the behaviours identified as adaptive performance in the work performance literature, where LePine, Erez and Johnson (2002a), based on an earlier study (LePine, Colquitt and Erez, 2000) suggested considering adaptive performance an independent work performance domain.

To further investigate adaptability as part of work performance, the literature citing LePine, Colquitt and Erez (2000) was tracked. The tracking revealed an emerging strand addressing Adaptive performance in the work performance literature (Baard, Rench and Kozlowski, 2014; Jundt, Shoss and Huang, 2015). In their 2015 review of extant literature covering the fifteen years from the emergence of the construct, Jundt, Shoss and Huang described adaptive performance as behaviours that individuals *"enact in response to or anticipation of changes relevant to job-related tasks"* (p. 55) and reported that leadership influence the emergence. Moreover, that adaptiveness relates both to learning, i.e. proactively anticipating changes, and adapting to imposed change (Jundt, Shoss and Huang, 2015). Jundt, Shoss and Huang (2015) summarised that adaptive performance can be related to externally induced changes; responding to actual or anticipated work demands; or learning and applying new behaviour to develop performance. This distinction between learning and changing corresponds well with the findings in an integrated conceptual review of the individual- and team-level performance adaptation literature by Baard, Rench and Kozlowski (2014), which also support that the intention to promote adaptive capacity guides certain leadership interventions. See table 7 for the definition of the intention to explore and promote adaptive performance and its literature warranted causal effects.

**Table 7. Theoretical Framework, Intentionality stratum. The intention to pursue exploration and adaptive performance.**

<b>Definition</b>	<b>H<sub>3</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>4</sub>: A leader can promote exploration and adaptive performance by influencing the relevant contextual factors that are possible to change within their leadership context</b>
The intention to build the foundation for future business outside the current business or to disrupt, rethink and significantly change existing operation. Focus on promoting adaptive performance to explore future business platforms through innovation and experimentation; to build new business models; and, to leverage new competencies, technologies, and ways of working.	(Benner and Tushman, 2003; Baard, Rench and Kozlowski, 2014; Dulewicz and Higgs, 2005; Higgs and Dulewicz, 2016; Jundt, Shoss and Huang, 2015; Lavie, Stettner and Tushman, 2010; Pawar and Eastman, 1997; Rosing, Frese and Bausch, 2011; Rosing and Zacher, 2015; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012; Yukl, 2013)	(Berson <i>et al.</i> , 2006; Lavie, Stettner and Tushman, 2010; Morgeson and Humphrey, 2006; Morgeson and Humphrey, 2008; Shalley and Gilson, 2004)

Source: Literature review.

### 4.3 Human Capital and Contextual Performance

Yukl (2008) identified the third determinant of organisational performance, human capital quality as “*the extent to which the members of an organization have the skills and motivation needed to do the work effectively*” (p. 710). Yukl (2008) drew upon empirical support to elaborate that it concerns the task-relevant experience and skills, the engagement and organisational commitment, as well as the quality of the relations in the organisation. Yukl (2008) accounted for findings that the relevant human capital has been found to positively affect both exploitative and explorative performance, respectively. In the ambidexterity literature, similar findings report that the quality of the human capital influences explorative and exploitative performance (Raisch and Birkinshaw, 2008; Birkinshaw and Gibson, 2004). In continuation, Yukl (2008) stressed the importance of recruitment and retention in conjunction with the influence of leadership as key influencers on the competitive capacity of the firm. That staff composition influence performance was confirmed in Porter and McLaughlin’s (2006) seminal review of the organisational context literature, where they included eight articles in the people/composition category. Patel, Pettitt and Wilson (2012) concur that team composition is an important antecedent to the performance by summarising 34 studies confirming differing influences on collaborative performance. In their extensive review, Patel, Pettitt and Wilson (2012) also summarised six studies warranting the influence of skills on performance and summarised twelve studies finding that training is a key support measure for performance. Several other authors concur that training to improve human capital quality is an important priority guiding leadership (e.g. Berson *et al.*, 2006; Morgeson and Humphrey, 2008).

When it comes to engagement and orchestrating collaborative behaviour, there is a significant amount of the reviewed literature using Organisational Citizenship Behaviour (OCB) or contextual performance as the dependent variable when investigating leadership (e.g. DeGroot, Kiker and Cross, 2000; Ehrhart, 2004; Purvanova, Bono and Dzieweczynski, 2006; Wang *et al.*, 2005). OCB pertains to discretionary employee behaviours that go beyond the job demands, which enhance co-worker productivity, optimal utilisation of resources, cross-team and organisational coordination, good work climate and stability of organisational performance (Brief and Motowidlo, 1986; Koopmans *et al.*, 2011; Motowidlo, Borman and Schmit, 1997; Motowidlo and Van Scotter, 1994; Organ, 1997; Podsakoff *et al.*, 2000; Viswesvaran and Ones, 2000). Earlier, many authors differentiated between OCB and contextual performance; however, a convergence between the contextual performance and OCB literatures has emerged (Koopmans *et al.*, 2011; Motowidlo, 2000), and a comparison of the underlying behaviour reveals that the two strands address the same contributions (Motowidlo, 2000; Podsakoff *et al.*, 2000).

Further supporting the relevance of contextual performance as a leadership intention are the two categories of OCB investigated by Ehrhart (2004): OCB-I, which is citizenship behaviour directed towards other Individuals; and, OCB-O, which is directed towards promoting the Organisation's purposes. The individual OCB, Ehrhart (2004) summarised from extant literature as helping colleagues with their workload, doing extra to help newcomers or people who have been absent from work, and showing care for colleagues' wellbeing. The organisational OCB he summarised as assuming responsibility beyond the norm, work attendance, keeping rules when no-one is watching, ensuring sensible use of organisational resources, and accepting the work setting without undue complaints (Ehrhart, 2004). In their field study, Purvanova, Bono and Dziewieczynski (2006) found that there is a direct positive relationship between transformational leadership and citizenship performance and drew upon Podsakoff et al. (2000) in their understanding of OCB. Podsakoff et al. (2000) summarised 30 identified forms of citizenship behaviour<sup>iii</sup> and analysed the relations to objective organisational performance measures across four studies undertaken between 1994-97. The results support that citizenship is positively related to organisational performance (Podsakoff *et al.*, 2000) further warranting that developing an organisation permeated by citizenship is an important leadership intention<sup>iv</sup>. Moreover, in the reviewed literature OCB and task- or adaptive performance is often considered desired outcomes together (e.g. Dalal, 2005; Piccolo and Colquitt, 2006; Wang *et al.*, 2011) confirming the importance of balancing intentions.

Finally, as posited by Yukl (2008) relations are an important part of the human capital quality. In the reviewed literature, Piccolo and Colquitt (2006) concur, and found that the LMX quality moderated three important relations between leadership and 1) positive perceptions of job characteristics; 2) higher task performance; and, 3) more organisational citizenship behaviour, placing relations as an important part of the human capital domain. The findings (Piccolo and Colquitt, 2006) further support the importance for a leader's attention to how he exercises his leadership in the co-creation with followers, as the enactment style, LMX and the follower's propensity to follow are related (Avolio and Gardner, 2005; Avolio *et al.*, 2004a; Gardner *et al.*, 2005; Uhl-Bien *et al.*, 2014). For the definition of the human capital quality intention and the causal effects warranted in the literature see table 8.

**Table 8. Theoretical Framework, Intentionality stratum. The intention to pursue human capital quality and contextual performance.**

<b>Definition</b>	<b>H<sub>5</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>6</sub>: A leader can promote the human capital quality and contextual performance by influencing the relevant contextual factors that are possible to change within their leadership context</b>
The intention to develop the quality of the human capital and build high-quality relations conducive to the current or future organisational functioning. Focus on promoting contextual performance to enable either exploitation or exploration, or both.	(Berson <i>et al.</i> , 2006; DeGroot, Kiker and Cross, 2000; Ehrhart, 2004; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Piccolo and Colquitt, 2006; Podsakoff <i>et al.</i> , 2000; Purvanova, Bono and Dzieweczynski, 2006; Wang <i>et al.</i> , 2005; Yukl, 2008)	(Berson <i>et al.</i> , 2006; Birkinshaw and Gibson, 2004; Ehrhart, 2004; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Piccolo and Colquitt, 2006; Podsakoff <i>et al.</i> , 2000; Porter and McLaughlin, 2006; Raisch and Birkinshaw, 2008; Wang <i>et al.</i> , 2005; Yukl, 2008)

Source: Literature review.

In the following chapter the determinant stratum identified in the development of the conceptual framework is enriched into a theoretical framework.



# Chapter Five

## 5. Determinant structures

The content analysis of the reviewed literature revealed four clusters with causal tendencies in the determinant stratum. The degree of physical separation resulting in increased demands to leadership to reach the necessary levels of coordination, collaboration and communication (e.g. Bell and Kozlowski, 2002; Patel, Pettitt and Wilson, 2012). The presence of environmental risk, threat, danger or the error criticality putting higher demands on the consequences of decision making (e.g. Avolio *et al.*, 2004a; Morgeson and Humphrey, 2008). The level of external complexity, which, together with dynamism, increases the need for empowerment and changes the demands to leadership (e.g. Pawar and Eastman, 1997; Pearce, 2004). The final cluster concerns the level of external environmental stability versus dynamism, addressing the rates of change and the unpredictability demanding differing leadership responses (e.g. Dinh *et al.*, 2014; Lavie, Stettner and Tushman, 2010). The literature related to the clusters, 1) Physical distance, 2) Risk Intensity, 3) External complexity, and 4) External dynamism is reviewed in the following sections.

### 5.1 Physical distance

Through a literature review, Bell and Kozlowski (2002) identified that in virtual teams, geographical dispersion exercises hindering effects due to less face-to-face communication. Hence, the leader needs to consider how to mitigate the effects of the separation (Bell and Kozlowski, 2002). Keller (2006) drew upon extant studies from the Substitutes for Leadership literature (Podsakoff, MacKenzie and Bommer, 1996; Jermier and Kerr, 1997) and identified distance as a leadership neutralizer in a longitudinal study of project team performance. The meta-analysis (Podsakoff, MacKenzie and Bommer, 1996), which Keller (2006) drew upon confirms that spatial distance exercises a hindering influence on leadership and work performance. For example, Podsakoff, MacKenzie and Bommer (1996) found that spatial distance was negatively related to in-role performance but positively related to role conflict. In the same vein, Antonakis and Atwater (2002) who reviewed the literature on leader distance, reported negative effects of physical distance on the leader-member exchange due to a reduction of the communicative richness; which, in turn, results in less effective leadership influence (Antonakis and Atwater, 2002).

Adding to the geographical dispersion is the temporal distribution, which reinforces detachment and inhibits communication (Bell and Kozlowski, 2002). The temporal separation can stem from working across different time zones and exercises a hindering effect on communication as it turns asynchronous constraining collaboration and leadership (Avolio, Walumbwa and Weber, 2009; Bell and Kozlowski, 2002; Patel, Pettitt and Wilson, 2012). The effect from time zones is evident; however, similar temporal separation effects can also be expected from working shifts as in a hospital or a manufacturing company. Interestingly, Antonakis and Atwater (2002) highlighted that leader distance pertains to the perceived leader-follower interaction frequency, which does not necessarily depend on the physical distance, but will be influenced by time separation. Bell and Kozlowski (2002) suggested that in dispersed teams, the leader need to implement a system that allows the team members to monitor their performance, indicating a shift towards shared leadership (Pearce, 2004). Furthermore, the need for the leader to provide a clear and engaging direction increases in a virtual setting to form the basis for self-monitoring and self-regulating (Bell and Kozlowski, 2002). The virtual leader needs to initiate more structure than leaders in proximal settings and develop processes, which the team members are trained in to compensate for the poorer opportunities for the leader to exercise direct leadership (Bell and Kozlowski, 2002). From extant literature Bell and Kozlowski (2002) summarized how distance demands the reinforcement of expectations to how group members collaborate and for aligning motivational incentives to support the desired behaviour. Also, how the need for clear and documented guidelines; for standard operating procedures; and for building an individual and shared understanding of role expectations increases. The findings discussed suggest that separation exercises primarily hindering effects. Also, certain leader behaviours are needed to maintain leadership effectiveness along with shaping a climate that mitigate the effects. As such, physical distance is defined, and its effects summarised in table 9.

**Table 9. Theoretical Framework, Determinant stratum. Physical distance.**

<b>Definition</b>	<b>H<sub>7</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>8</sub>: Has causal powers to help or hinder leadership and/or work performance</b>
How close or how far the members of the team or organisation are physically located from each other and from the leader.	(Antonakis and Atwater, 2002; Bell and Kozlowski, 2002)	(Antonakis and Atwater, 2002; Avolio, Walumbwa and Weber, 2009; Bell and Kozlowski, 2002; Jermier and Kerr, 1997; Keller, 2006; Patel, Pettitt and Wilson, 2012; Podsakoff, MacKenzie and Bommer, 1996)

Source: Literature review.

## 5.2 Risk intensity

A centrepiece in ethical leadership is the moral intensity of the issues facing the decision-maker, pertaining to two dimensions, 1) the potential harm from the decision, and 2) the social acceptance of the decision (Brown and Treviño, 2006). The latter concerns the climate for ethical conduct as discussed in the social stratum, while the former relates to factors in the external environment which cannot be changed by the leader, but only mitigated. Drawing upon Frey (2000) who studied *The impact of moral intensity on decision making in a business context* Brown and Treviño (2006) found that the greater the potential harm, the more attention the observers will pay to the actions of the leader and expect ethical leadership. Frey (2000) synthesised previous studies on moral intensity in conjunction with his own research and found that the potential consequences of acting have a determinant influence on whether decision-makers decide to act. Hence, the risk intensity will exercise an influence on both leaders and team members in their propensity to act. Hannah et al. (2009) who investigated leadership in extreme contexts, concur that the magnitude of consequences is a major factor with causal powers influencing leadership. They extend the understanding of the risk environment with three more factors; the probability of consequences; whether the potential harm is physical, material or psychological; and, the proximity of the threat (Hannah *et al.*, 2009).

Hannah et al. (2009) reported several influences on leadership from risk presence, hereunder that it hinders effective sense-giving and makes motivating followers more difficult. Also, that followers can react with withdrawal and paralysis; that the process for granting influence to the leader is changed and that the development of trust and cohesion is influenced by the risk intensity (Hannah *et al.*, 2009). Moreover, they also reported findings that in extreme contexts the leader must to a greater extent mitigate the stress levels and stimulate the confidence to perform among followers (Hannah *et al.*, 2009). Avolio et al. (2004a) agree that leadership can mitigate the effects of a risk-intense environment. *“That is, when followers believe in their leader’s ability, integrity, and benevolence, they are more trusting and willing to engage in risk-taking behaviors”* (Avolio *et al.*, 2004a, p. 15). Concurring, Antonakis, Avolio and Sivasubramaniam (2003) reported how increased risk alter the prototypical expectations to leadership. Specifically, in high-risk environments, Management-by-Exceptions and charismatic leadership becomes increasingly important and expected (Antonakis, Avolio and Sivasubramaniam, 2003). Campbell (2012), who reviewed the literature on leadership in dangerous contexts, concur that the risk intensity influences leadership and work performance.

In particular, the cognitive impact ranging from stress to arousal, and the affective reactions ranging from dysfunctional implications to increased attachment or cohesion; which together manifest themselves in behaviours (Campbell, 2012). Both Hannah et al. (2009) and Campbell (2012) address extreme contexts; however, also in the more ordinary work setting the error criticality influences work performance. In work design literature Morgeson and Humphrey (2008) reported how higher levels of consequences of failure, be that physical, material or psychological, shifts the focus among employees to the prevention of errors rather than to pursue desired outcomes. Also, how higher error criticality can hinder follower discretion and decrease the willingness to assume accountability (Morgeson and Humphrey, 2008), which in turn could stifle the emergence of empowerment. Moreover, Morgeson and Humphrey (2008) report how the error criticality attenuates the performance climate through a reduced propensity to take the initiative, engage in a wide variety of tasks or take on challenging tasks. Together risk intensity and the support for its causal effects are available in table 10.

**Table 10. Theoretical Framework, Determinant stratum. Risk intensity.**

<b>Definition</b>	<b>H<sub>9</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>10</sub>: Has causal powers to help or hinder leadership and/or work performance</b>
The presence of threat or error potential; how bad the consequences would be; and, how likely it is to happen, ranging from high-risk to low-risk context.	(Antonakis, Avolio and Sivasubramaniam, 2003; Avolio et al., 2004a; Brown and Treviño, 2006; Frey, 2000; Hannah <i>et al.</i> , 2009)	(Brown and Treviño, 2006; Campbell, 2012; Frey, 2000; Hannah <i>et al.</i> , 2009; Morgeson and Humphrey, 2008)

Source: Literature review.

### 5.3 External complexity

Dinh et al.'s (2014) review of leadership theory in the new millennium displayed increased attention to complexity in leadership theory. A significant contribution in this stream is Complexity Leadership Theory (Uhl-Bien and Marion, 2009; Uhl-Bien, Marion and McKelvey, 2007), where it is argued that the increasing connectedness of the external environment demand leadership which create the requisite complexity in the organisation. Hence, it is necessary to understand the external factors in the business milieu demanding requisite complexity, as suggested by Johns (2006). Such an understanding is offered in the literature on environmental complexity, which was reviewed by Cannon and St. John (2007), who factor-analysed eleven measures of environmental complexity.

Cannon and St. John (2007) referred to Duncan (1972), who Johns (2006) also drew upon. Both reported Duncan (1972) as the first to conceptualise environmental complexity as comprising the number of factors in the decision context and the dissimilarity between them. Through their factor analysis of industry-level data, indicating a clear external focus, Cannon and St. John (2007) confirmed the two dimensions and their relation to firm performance. Their review of the environmental complexity literature revealed that the influence on the decision-making process also serves well as an inclusion criterion when it comes to including external factors in the leadership context. In the reviewed literature, Pawar and Eastman (1997) recognised that external complexity influences the form of transformational leadership required, proposing that higher complexity results in higher organisational receptivity to transformational leadership. In their extensive literature review of factors influencing collaborative working, Patel, Pettitt and Wilson (2012) elaborated on environmental complexity factors which can hinder effective collaboration. For example, Patel, Pettitt and Wilson (2012) found support for the influence of contractual and legal constraints; variation in the business climate across different markets; the complexity of task-related technologies; the number of stakeholder contacts and variation in demands; the resource acquisition process; the information landscape; and, the variation in external task demands. These factors hold causal tendencies to hinder effective interaction, coordination, communication, task performance, adaptive performance, organisational citizenship behaviour, and decision-making (Patel, Pettitt and Wilson, 2012). Conversely, the deliberate orchestration of collaborative practices is reported to mitigate the hindering influence from the abovementioned complexity factors (Patel, Pettitt and Wilson, 2012). The influence of complexity is also recognised by Pearce (2004), who suggests that the more complex the environment, the more leadership needs to be shared to create the necessary ability to perform across the variability of factors.

Further to the understanding an integrated context typology was offered by Osborn, Hunt and Jauch (2002), who drew on complexity theory to outline the differing leadership demands in four contexts: stability, crisis, dynamic equilibrium, and the edge of chaos. Osborn, Hunt and Jauch (2002) assume that complexity and volatility are keys to understand vital parts of the external environment triggering different demands to effective leadership. Their typology stresses the importance of understanding complexity and dynamism separately and together. This is exemplified in their definition of stability where complexity can be both high and low, and stability emerges when the requisite fit between external and internal environment is appropriate (Osborn, Hunt and Jauch, 2002). The key to understanding Osborn, Hunt and Jauch's (2002) crises context is the loss of equilibrium and the dynamism stemming from the factors pushing things out of balance.

Although not accounted for, this seems to be possible in both complex and non-complex contexts. In the dynamic equilibrium context, high complexity and a somewhat predictable dynamism demand different leadership than in a crisis, as the balanced patterns repeat themselves allowing prepared contingent responses. In the context on the 'edge of chaos' the complexity and dynamism are high with the significant difference to the dynamic equilibrium context that the predictability and linearity are lost. The conceptualisation of context proposed by Osborn, Hunt and Jauch (2002) indicates the importance for the leader to understand each of the contextual drivers (complexity and dynamism) in order to understand the interplay, cementing the relevance of disentangling the factors. In sum, external complexity and its contextual effects are summarised in table 11.

**Table 11. Theoretical Framework, Determinant stratum. External complexity.**

Definition	<b>H<sub>11</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>12</sub>: Has causal powers to help or hinder leadership and/or work performance</b>
The complexity outside the leader's area of responsibility influencing the decision making in the leader's area. The more elements influencing decision making and the greater the differences between them; the more complex the external environment is.	(Cannon and St. John, 2007; Duncan, 1972; Johns, 2006; Osborn, Hunt and Jauch, 2002; Pawar and Eastman, 1997; Pearce, 2004; Uhl-Bien and Marion, 2009; Uhl-Bien, Marion and McKelvey, 2007)	(Cannon and St. John, 2007; Patel, Pettitt and Wilson, 2012)

Source: Literature review.

## 5.4 External dynamism

Duncan (1972) identified that dynamism, that is, how much the environmental factors change over time, exercises an influence on decision making. Duncan (1972) found that dynamism influences the level of uncertainty, as also posited by Osborn, Hunt and Jauch (2002) in their 'edge of chaos'. In their studies of ambidexterity, Lavie, Stettner and Tushman (2010) and Raisch and Birkinshaw (2008) identified environmental dynamism as an antecedent to the need for ambidexterity, i.e. striking a balance between exploration and exploitation. Lavie, Stettner and Tushman (2010) drew upon the work of Dess and Beard (1984) who defined environmental dynamism as the rate of change and the unpredictability in a firm's external environment.

Raisch and Birkinshaw (2008) drew upon Jansen, Vera and Crossan (2009) and Jansen, Van den Bosh and Volberda (2006) in describing dynamic environments as characterized by changes in technologies, variations in customer preferences, and fluctuations in product demand or supply of materials. Together these ambidexterity authors concur that increased external dynamism demand that leaders balance the focus on exploration and exploitation, i.e. move towards more ambidextrous leadership.

The external dynamism can create the disequilibrium addressed by Osborn, Hunt and Jauch (2002) by making current solutions obsolete, which in turn, influences the need for the leader in driving more exploration (Jansen, Van den Bosh and Volberda, 2006). The disequilibrium results in uncertainty demanding more transformational leadership, which contribute to the emergence of exploratory innovation; while maintaining the necessary amount of transactional leadership, which facilitate exploitative performance (Jansen, Vera and Crossan, 2009). The influence of environmental dynamism resulting in uncertainty is recognised by other authors to increase the effect of authentic leadership (Avolio and Gardner, 2005; Avolio *et al.*, 2004a). In the same vein, Pawar and Eastman (1997) refer to studies finding that an uncertain context is more conducive to the emergence of charismatic leadership. This highlights that a causal effect of external dynamism is uncertainty for the leader and followers (Benner and Tushman, 2003; Dinh *et al.*, 2014; Johns, 2006; Pawar and Eastman, 1997). It follows that environmental uncertainty demands that the leader creates predictability on the controllable parts of the operation (Pawar and Eastman, 1997).

Johns (2006) considers environmental uncertainty an important task variable affecting individual information processing, sense-making, organisational cohesion, and decision making. In the same vein, together with external complexity, external dynamism is considered a driver of the need for shared leadership by Pearce (2004), as empowerment helps mitigate uncertainty with mandates to respond. This finding corresponds well with Johns' (2006) argument that uncertainty can hinder effective information processing and decision making, indicating the need for empowerment. A similar recognition concerns the assumption underpinning many of the leadership theories which take into account event-level variability reviewed by Dinh *et al.* (2014). These theories presume that dynamism requires leaders and followers to continuously adjust to environmental uncertainty (Dinh *et al.*, 2014). Together, see table 12 for external dynamism and its causal effects.

**Table 12. Theoretical Framework, Determinant stratum. External dynamism.**

<b>Definition</b>	<b>H<sub>13</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>14</sub>: Has causal powers to help or hinder leadership and/or work performance</b>
How much, how often, how fast, and how predictably the elements which influence decision making from outside the leader's area of responsibility change.	(Benner and Tushman, 2003; Duncan, 1972; Jansen, Van den Bosh and Volberda, 2006; Jansen, Vera and Crossan, 2009; Lavie, Stettner and Tushman, 2010; Osborn, Hunt and Jauch, 2002; Pearce, 2004; Raisch and Birkinshaw, 2008)	(Avolio and Gardner, 2005; Avolio <i>et al.</i> , 2004a; Benner and Tushman, 2003; Dinh <i>et al.</i> , 2014; Johns, 2006; Marta, Leritz and Mumford, 2005; Pawar and Eastman, 1997)

Source: Literature review.

From the determinant perspective in this chapter, the next part of the literature review pertains to the systemic structures within the organisation.



# Chapter Six

## 6. Systemic structures

In the systemic stratum six clusters of factors with causal powers were identified in the reviewed literature: 1) Hierarchical level (e.g. Antonakis, Avolio and Sivasubramaniam, 2003; Avolio *et al.*, 2004b); 2) Centralization (e.g. Berson *et al.*, 2006; Patel, Pettitt and Wilson, 2012), 3) Formalization, (e.g. Howard-Grenville, 2005; Podsakoff *et al.*, 2006), 4) Internal complexity, (e.g. Morgeson and Humphrey, 2008; Pearce, 2004), 5) Interdependence, (e.g. Bell and Kozlowski, 2002; Pawar and Eastman, 1997), and 6) Resource constraints, (e.g. Cogliser and Schriesheim, 2000; Lavie, Stettner and Tushman, 2010). For the systemic structures, several of the reviewed authors (Avolio *et al.*, 2004b; Brown and Treviño, 2006; Johns, 2006; Martins and Terblanche, 2003; Morgeson and Humphrey, 2008; Uhl-Bien *et al.*, 2014) drew upon the work of Katz and Kahn (1978). In their classic book, *The Social Psychology of Organizations* Katz and Kahn (1978) proposed several structural features of organisational systems influencing leadership. A comparison of the emerging clusters to Katz and Kahn (1978) aided the content analysis, and the clusters identified align well with Katz and Kahn's propositions.<sup>v</sup> Also, Katz and Kahn (1978) identified five major categories of subsystems in organisations which aided the content analysis by raising attention to the search for factors with causal tendencies across all five subsystems. The five subsystems are the Core Operations; the Inflow/Outflow; the Human Resource; the Business Development; and, the Business Management subsystems.<sup>vi</sup> The following sections review the literature through the systemic stratum lens.

### 6.1 Hierarchical level

In the reviewed literature some authors raise the attention to that the leader's placement in the organisation's hierarchical levels influences what comprise effective leadership (Antonakis, Avolio and Sivasubramaniam, 2003; Avolio *et al.*, 2004b; Dinh *et al.*, 2014; Wang *et al.*, 2011). In turn, this indicates that the positional level holds causal powers to influence the choice of leadership behaviour. Wang *et al.* (2011) conducted a meta-analytic review of transformational leadership's effectiveness across three organisational levels, as related to the individual task, creative and contextual performance; as related to team performance; and, as related to overall indicators of organisational performance.

Wang et al. (2011) confirmed that the transformational leadership range is relevant at all levels; but as contended by other authors (Antonakis, Avolio and Sivasubramaniam, 2003; Dinh *et al.*, 2014) the difference in hierarchical level influences the effectiveness of the same leader behaviour. Antonakis, Avolio and Sivasubramaniam (2003) refer to studies reporting altering prototypical expectations to leaders at different levels; while Dinh et al. (2014) emphasised that different hierarchical levels set different demands to leadership. That hierarchical level sets different contextual demands to leadership was contended early by Katz and Kahn (1978), who posited that three organisational levels differentiate the demands; lower level; intermediate levels; and, higher levels.

Since, the three-level differences have been confirmed by Mumford, Campion and Morgeson (2007), who found that the demands for strategic and business skills increases as the leader level goes up, while the demand for cognitive and interpersonal skills remain rather stable across levels. Three years later, DeChurch et al. (2010) confirmed substantial empirical support for the three-level organisational structure demanding different leadership through an assessment of 25 years of leadership research. DeChurch et al. (2010) also reported empirical recognition that some of the leader practices are the same, e.g. direction setting, operational coordination and boundary spanning, but that hierarchical context demand that it is exercised with different time horizons, direct or indirect, and spanning across different boundaries.

Finally, Kaiser et al. (2011) undertook an extensive review of the empirical literature on the differences in managerial jobs at the bottom, middle and top confirming the three-level distinction. The review (Kaiser *et al.*, 2011) was supported in a related study empirically testing if behaviours related to managerial effectiveness change with organisational level and the study found support for differing demands (Kaiser and Craig, 2011). In this study they also found differing effect of leadership practices related to positional level (Kaiser and Craig, 2011)<sup>vii</sup>. In support of positional placement helping or hindering certain leadership practices, Avolio et al. (2004b) found different effects of transformational leadership between leadership from higher-level leaders on frontline staff and the lower-level leaders leading them directly. Given the discussion, the hierarchical levels in the leadership context can be summarised as displayed in table 13.

**Table 13. Hierarchical levels in the leadership context**

Level	Focus horizon	Responsibilities	Contextual demands to leadership
Top (Executive or SBU-Manager)	Long 3-10+ years	Performance of a company, Division or independent Business Unit	Lead organisation: link organisation to the external environment, align vision about the future, set policy and strategic direction, create an organisational structure to deliver strategy, define company values underpinning organizational climates to support strategy, secure capital resources, decide and orchestrate the exploitation-exploration balance.
Middle (Middle Manager, Functional Manager)	Mid 2-3 years	Performance of multiple functional units or a functional organisation	Interpretation of structure: translate strategy and policies into operating plans, coordinate functional interaction, allocate resources, serve as 'translator' of strategy throughout the organisation, help employees cope with change, align effort and structure to organisational intentions.
Low (Supervisor, Direct Leader, Frontline leader)	Short Weeks-2 years	Performance of a small group or team within a single function	Execution within the structure: assign tasks, execute operating plans, supervise and direct the day-to-day core work, anticipate and solve operational problems, distribute resources to individuals and teams, align efforts to organisational intentions.

Source: adapted from Kaiser *et al.*, 2011, p. 84.

In continuation, the hierarchical level as a contextual factor is defined, and its effects on leadership is summarised in table 14. Below the table the literature review continues by considering centralisation as a contextual factor.

**Table 14. Theoretical Framework, Systemic stratum. Hierarchical level.**

Definition	H <sub>15</sub> : Has causal powers to influence the choice of leadership behaviour	H <sub>16</sub> : Has causal powers to help or hinder leadership
Whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.	(Antonakis, Avolio and Sivasubramaniam, 2003; Avolio <i>et al.</i> , 2004b; DeChurch <i>et al.</i> , 2010; Dinh <i>et al.</i> , 2014; Kaiser and Craig, 2011; Kaiser <i>et al.</i> , 2011; Katz and Kahn, 1978; Mumford, Campion and Morgeson, 2007; Wang <i>et al.</i> , 2011)	(Avolio <i>et al.</i> , 2004b; Kaiser and Craig, 2011)

Source: Literature review.

## 6.2 Centralization

In research on the culture that stimulates innovation Martins and Terblanche (2003) identified centralization as influencing the emergence of innovation. Specifically, exercising an influence on the emergence of autonomous initiative; group interaction; flexibility and freedom related to enacted empowerment; which all promote innovation. Their findings are supported by research into what drives creativity (Andriopoulos, 2001; Shalley and Gilson, 2004) and organisational learning (Berson *et al.*, 2006), reporting that centralization negatively affects exploration and creativity. In agreement, Raisch and Birkinshaw (2008) reported that centralised decisions are conducive to exploitative performance while decentralized mandates promote exploration. In their meta-study of collaborative working, Patel, Pettitt and Wilson (2012) found that high performing workplaces are characterised by decentralization and delegation of decision authority resulting in more flexible and rapid responses to changing demands. Patel, Pettitt and Wilson (2012) also found that decentralized organisations rely on decisions governed by expertise rather than by a hierarchy of authority. Michie and West (2004) concurred and reported findings that delegating authority to solve problems results in more rapid responses; however, also stressing that it demands the necessary expertise to yield better results. In accordance with the response speed effect, Pawar and Eastman (1997) reported that decentralization is a means to meet external uncertainty. Hence, decentralizing concerns how to ensure optimal functioning to meet the contextual demands, and promote the organisational intentions; while recognising the limits centralization sets for the leader's discretion to empower.

Indicating the importance of understanding which part of the leader's mandate is centralised and which remains within the leader's authority, Howard-Greenville (2005) highlighted that the routines, processes and procedures could be changed locally in some companies, while in other companies, such decisions are centralized. Mandates and decisions can be centralized to ensure qualified expert decisions (Patel, Pettitt and Wilson, 2012); to ensure alignment (Raisch and Birkinshaw, 2008); to ensure fast decisions in ambiguous situations (Hannah *et al.*, 2009); to maintain control (Pawar and Eastman, 1997); or, to ensure coordination and prioritisation, such as the allocation of scarce resources (Hogg, Van Knippenberg and Rast, 2012a). As the above discussion indicates, centralization should be understood as; but not only be considered as; a static set of position mandates organised in the structure and job descriptions. Within the formal position mandate (see next section on formalization) it should also be an active leadership tool used to promote the organisational intentions; and understood per process, task, decision area or function; and, done deliberately to empower action.

In that vein, it naturally follows that a precondition for effectively sharing leadership is delegating decision authority to empower action (Avolio *et al.*, 2004b). Avolio, Walumbwa and Weber (2009) support this mechanism with their report of negative influence from centralization on willingness to exert extra-role effort. In line herewith, Michie and West (2004) built on empirical support to argue that decentralization is part of job enrichment. In continuation that job enrichment leads to higher performance; quicker response mechanisms; more learning as employees have the discretion to experiment or change ways of working; more initiative; less need for support from the leader; and, higher productivity (Michie and West, 2004). In the work design literature, Morgeson and Humphrey (2008) concur and report that decentralization, i.e. *“the amount of control and discretion the group is allowed”* (p. 16) influences work effort; intra-group cooperation; helping behaviour; communication; and, commitment and satisfaction. Wang *et al.* (2005) concur by reporting that expanding decision authority for employees influence the LMX-quality positively, and in turn, result in higher job performance. Centralization is defined and the causal effects summarised in table 15. Relatedly, formalization becomes important in understanding the leadership context and is investigated next.

**Table 15. Theoretical Framework, Systemic stratum. Centralization.**

<b>Definition</b>	<b>H<sub>17</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>18</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>19</sub>: A leader can increase or decrease centralization in their leadership context within the limitations given by the organisational and external context</b>
The degree to which decision authority and mandate are kept centralised or delegated into the organisation.	(Hannah <i>et al.</i> , 2009; Hogg, Van Knippenberg and Rast, 2012a; Howard-Grenville, 2005; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997)	(Andriopoulos, 2001; Avolio, Walumbwa and Weber, 2009; Berson <i>et al.</i> , 2006; Martins and Terblanche, 2003; Michie and West, 2004; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008; Shalley and Gilson, 2004; Wang <i>et al.</i> , 2005)	(Avolio <i>et al.</i> , 2004b; Hannah <i>et al.</i> , 2009; Hogg, Van Knippenberg and Rast, 2012a; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008; Wang <i>et al.</i> , 2005)

Source: Literature review.

### 6.3 Formalization

Formalization concerns the level of formal, codified, and documented directives about how to make decisions, perform procedures, conduct business, and act in other practice areas, hereunder exercise leadership (Chatman and Cha, 2003; Howard-Grenville, 2005; Patel, Pettitt and Wilson, 2012; Podsakoff *et al.*, 2006). Formalization influences trust (Schoorman, 2007) by creating predictability and transparency through clear documented expectations. An example is the job description, which can be considered foundational for alignment of the psychological contract fulfilment, which is positively related to task performance and OCB (Turnley *et al.*, 2003). Brown and Treviño (2006) emphasised the scaffolding effect of formalization and considered it a behavioural control system, where the level of clarity from formalization can promote ethical behaviour. That the level of clarity about behavioural expectations influences leadership is confirmed by Antonakis, Avolio and Sivasubramaniam (2003). They stated that whether the organisation is organic or bureaucratic may require different combinations of leadership behaviours. It relates to understanding how documented policies, procedures, rules and regulations can substitute leadership as the documented guidance exercises an influence on work performance (Kerr and Jermier, 1978; Podsakoff, MacKenzie and Bommer, 1996). The leader needs to understand which formal directives must be adhered to; which can be amended to fit the organisational intentions or contextual demands better; and which behavioural expectations should be clarified by formalising (Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008). Formalization helps leadership by enabling an aligned and unified systemic approach to continuous improvement, i.e. exploitative learning and knowledge transfer within the organisation (Berson *et al.*, 2006; von Krogh, Nonaka and Rechsteiner, 2012). Formalization supports the knowledge transfer among workers with documentation scaffolding the exchange. It aids in making accessible and communicating knowledge; capturing and disseminating learning to improve existing processes; and retaining and keeping up to date knowledge (Berson *et al.*, 2006).

When it comes to exploration, von Krogh, Nonaka and Rechsteiner (2012) emphasised a positive effect of fit-for-purpose formalization. As an example of fit-for-purpose formalization, consider a department with highly formalised standards for documenting and disseminating new knowledge, combined with no formal guidelines for how employees work on their core tasks (von Krogh, Nonaka and Rechsteiner, 2012)<sup>viii</sup>. It indicates that formalization in the leadership context should be understood and shaped from its helping or hindering effects on work performance behaviour aligned to the organisational intentions. It allows a definition of formalization and summation of its effects in table 16.

**Table 16. Theoretical Framework, Systemic stratum. Formalization.**

Definition	<b>H<sub>20</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>21</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>22</sub>: A leader can increase or decrease formalization in their leadership context within the limitations given by the organisational and external context</b>
The level of centrally or locally decided documented policies, procedures, rules, and guidelines which must be followed.	(Chatman and Cha, 2003; Howard-Grenville, 2005; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Podsakoff <i>et al.</i> , 2006; Raisch and Birkinshaw, 2008)	(Antonakis, Avolio and Sivasubramaniam, 2003; Berson <i>et al.</i> , 2006; Brown and Treviño, 2006; Kerr and Jermier, 1978; Podsakoff, MacKenzie and Bommer, 1996; Schoorman, 2007; Turnley <i>et al.</i> , 2003; von Krogh, Nonaka and Rechsteiner, 2012)	(Antonakis, Avolio and Sivasubramaniam, 2003; Brown and Treviño, 2006; Kerr and Jermier, 1978; Pawar and Eastman, 1997; Podsakoff, MacKenzie and Bommer, 1996; Raisch and Birkinshaw, 2008)

Source: Literature review.

Further, in understanding the systemic stratum, the contextual effects of internal complexity are discussed next.

## 6.4 Internal complexity

Patel, Pettitt and Wilson (2012) point to the division of labour as a driver behind the need for coordination, and to the differences in task type, scope and complexity as influencing communication and collaboration. The more variety in task demands and conditions between team members; the higher the complexity; and, the more effort is needed to coordinate and collaborate effectively (Patel, Pettitt and Wilson, 2012). Related to complexity, Patel, Pettitt and Wilson (2012) identified interdependence as a key influential factor, which will be discussed in the next section. Morgeson and Humphrey (2008) addressed job complexity as the “*the extent to which a job is multifaceted and difficult to perform*” (p. 19) and focused on how job complexity influences job satisfaction; job involvement; and the risk of perceived overload. Following the work design literature, a leader should strive to manage the complexity by understanding the job demands-abilities/resources fit most conducive to the organisational intentions. That is, put the right person in the right job and scope the job content to maximise the effect on realising the organisational objectives (Bakker and Demerouti, 2007; Morgeson and Humphrey, 2008).

Elkins and Keller (2003) reviewed the literature on leadership in the R&D context and found that high task complexity demands a different leadership approach than transactional operations environments. In these settings, Elkins and Keller (2003) found support for the effect of inspirational motivation to facilitate that the followers find solutions from their deep insight into the complexity; an insight that the leader most probably does not have. Also, encouraging members with different specialisation to utilise their different vantage points to qualify problem-solving and develop new solutions is relevant in high internal complexity.

Along the same lines, Pearce (2004) found internal complexity a key driver warranting the relevance of moving towards more shared leadership. He argued that *“the more complex the task, the lower the likelihood that any one individual can be an expert on all task components”* (Pearce, 2004, p. 49). A similar argument is set forward in the Substitutes for Leadership research (Kerr and Jermier, 1978). Oc (2018), who revisited Johns (2006) categorial framework on organisational context, referred to meta-analysis applying Wood's (1986) conceptualisation of complexity. The meta-analysis confirms that the positive relationship between team effectiveness and shared leadership goes up when complexity is higher. Wood (1986) defined complexity as comprising three elements; dynamic complexity, i.e. how often task requirement change; coordinative complexity, i.e. the dependencies in the inflow/outflow subsystems; and, component complexity, i.e. the number of unique acts, parts and information pieces required to solve the task. Extending Pearce's (2004) argument, von Krogh, Nonaka and Rechsteiner (2012) contended that the higher a need for knowledge creation, the more distributed leadership would be needed. Hence, von Krogh, Nonaka and Rechsteiner (2012) indicate that the complexity can also stem from an organisational intention to explore rather than only from existing operation.

That pursuing exploration in addition to exploitation results in increased organisational complexity and a need for increased coordination is well supported in the ambidexterity literature (Boumgarden, Nickerson and Zenger, 2012; Lavie, Stettner and Tushman, 2010). Raisch and Birkinshaw (2008) concur and argue that increased specialisation is a path to ensure focus and avoid the hindering effects of high complexity<sup>ix</sup>. Together the literature reviewed suggests that a leader should understand the internal complexity in conjunction with the external complexity discussed earlier. Based hereon shape structures to fit the purpose or mitigate unavoidable internal complexity through coordination and collaborative practices.



Interestingly, in the reviewed literature, no findings about influencing the emergence of complexity itself were identified. This is surprising given the extensive practitioner literature on complexity published by senior scholars (e.g. Steger, Amann and Maznevski, 2007; Nedopil, Steger and Amann, 2011; Ashkenas, 2009). Hence, warranted by the practitioner literature and for this thesis' field study, it is posited that the leader can also influence internal complexity itself rather than only mitigate the effects. Together the summary of internal complexity and its causal effects are displayed in table 17.

**Table 17. Theoretical Framework, Systemic stratum. Internal complexity.**

<b>Definition</b>	<b>H<sub>23</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>24</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>25</sub>: A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context</b>
The number of different job roles and specialised functions within the leader's area. In addition, within each function; the task complexity; that is the number of unique acts and information pieces required for the task. Also, how new the tasks are and how often the task requirements change.	(Bakker and Demerouti, 2007; Elkins and Keller, 2003; Morgeson and Humphrey, 2008; Oc, 2018; Patel, Pettitt and Wilson, 2012; Pearce, 2004; Raisch and Birkinshaw, 2008; von Krogh, Nonaka and Rechsteiner, 2012)	(Kerr and Jermier, 1978; Marta, Leritz and Mumford, 2005; Morgeson and Humphrey, 2008; Oc, 2018; Patel, Pettitt and Wilson, 2012; Wood, 1986)	(Steger, Amann and Maznevski, 2007; Nedopil, Steger and Amann, 2011; Ashkenas, 2009)

Source: Literature review.

As mentioned above also interdependence ad to the complexity; hence, we now turn to investigate interdependence further.

## 6.5 Interdependence

In the analysis of the literature, three perspectives on interdependence emerged; interdependence stemming from workflows within a unit; boundary-spanning interdependence stemming from workflows crossing boundaries; and, interdependence as an active leadership tool. These three perspectives are discussed in this section and consolidated into a definition and hypotheses on causal effects.

In their review of the team literature, Salas, Sims and Burke (2005) concurred with other authors (Bell and Kozlowski, 2002; Marta, Leritz and Mumford, 2005; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pearce, 2004) that to understand team effectiveness one must understand the interdependence in the environment. Bell and Kozlowski (2002) found that workflow interdependence is a key contextual factor influencing how a virtual team can communicate and collaborate. Bell and Kozlowski (2002) drew on an empirically tested framework for task interdependence outlining four types of interdependence (Van De Ven, Delbecq and Koenig, 1976). The least interdependent is *pooled/additive* work where members or units deliver each their contribution through independent activities, whereas *sequential* work is more interdependent as processes flow sequentially and unidirectionally from one member or unit to the next (Bell and Kozlowski, 2002). Thirdly, a *reciprocal* arrangement encompasses work and activities which flow forth and back between members or units. Finally, the most interdependent arrangement is the *intensive* interdependence where members or units must work and collaborate in close, continuous coordination to accomplish their goals (Bell and Kozlowski, 2002). In this vein, interdependence relates to the embeddedness researched by Howard-Greenville (2005) as the range of overlap and interlock between processes, procedures, and routines.

Interdependence holds causal powers to influence work performance, for example, when tight coupling helps the exploitative efficiency, or, conversely, when high interdependence hinders the adaptive capability (Benner and Tushman, 2003). Morgeson and Humphrey (2008) also referred to Van De Ven, Delbecq and Koenig (1976) and considered interdependence as “*the extent to which workers are connected to others*” (p. 25). Morgeson and Humphrey (2008) found that interdependence can stem from exchanges in the task inflow/outflow; goal overlaps; outcome interdependence occurring when rewards for one person or unit depends on others; or resource dependence when multiple parties draw up the same resources, be that experts, money or capacity.

Interestingly, Morgeson and Humphrey (2008) reported positive effects of interdependence on worker satisfaction and organisational commitment; motivation; communication between workers and transfer of tacit knowledge resulting in higher job performance. However, also that interdependence can lead to higher perceptions of overload due to coordination demands (Morgeson and Humphrey, 2008). To sum up, these findings imply that interdependence can positively and negatively influence an organisation's performance.

In continuation, the analysis of the reviewed literature confirms that the interdependence can span across functions, organisational units, and external parties (Bell and Kozlowski, 2002; Hogg, Van Knippenberg and Rast, 2012a; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997). Pawar and Eastman (1997) identified boundary-spanning context as a key contextual factor and proposed that organisations dominated by boundary-spanning units are more receptive to transformational leadership. Hogg, Van Knippenberg and Rast (2012a) investigated the literature on "*leadership across group and organizational boundaries*" (p. 232). They emphasised that leadership can be directed towards others than direct followers, i.e. other constituents in the organisation, including other leaders. The target of intergroup leadership is intergroup performance, that is, the interdependent part of the value creation when value-creating processes cross boundaries (Hogg, Van Knippenberg and Rast, 2012a). Hogg, Van Knippenberg and Rast (2012a) identified several effective actions for building such an intergroup relational identity: communicating the value created through the intergroup collaboration; orchestrating boundary-spanning relationships; forming boundary spanning leader coalitions; and, facilitating best practice sharing.

In the same vein, Yukl (2012), who proposed a taxonomy of effective leader behaviour, included the following boundary-spanning behaviours in the effective leadership range: networking; environmental scanning or monitoring; and, representing the organisation to external parties. Moreover, Yukl specifies that external parties, clients and suppliers can be targets of the leadership influence exercised in interdependent boundary-spanning activities (2013, p. 67). In support, Elkins and Keller (2003) found that boundary-spanning activity is important for R&D project success. Also, that successful leadership encompasses upward and outward influence towards decision-makers, resource owners, and the receiving internal organisation. Moreover, that boundary-spanning coordination, communication and influence can be directed towards external parties, be that suppliers, technology partners, governmental agencies or customers (Elkins and Keller, 2003). In sum, the literature shows that the leader's influence exercised to external parties can shape the interdependence to the extent that the interdependence is malleable.

In their research of leadership in organisational knowledge creation, von Krogh, Nonaka and Rechsteiner (2012) introduced the term *Ba*. *Ba*, which is Japanese for ‘place’, is used to pinpoint the shared spaces for interaction where knowledge is accessed, created or exchanged (von Krogh, Nonaka and Rechsteiner, 2012). *Ba* can be defined as anywhere individuals interact, encompassing the physical spaces, virtual collaboration platforms, knowledge repositories, meeting or reporting structures, councils, or communities (von Krogh, Nonaka and Rechsteiner, 2012). The physical and virtual understanding of *Ba* is interesting as the importance of interaction in the learning processes of both exploration and exploitation is consistently confirmed in innovation research (Andriopoulos, 2001; Berson *et al.*, 2006; Crossan, Lane and White, 1999; Martins and Terblanche, 2003; Shalley and Gilson, 2004). Von Krogh, Nonaka and Rechsteiner (2012) emphasized the importance of orchestrating boundary-spanning *Bas* to facilitate cross-organisational knowledge creation and dissemination. The introduction of *Bas* highlights that leadership can shape interdependence to support the emergence of learning. Across the three perspectives, interdependence and the effects are summarised in table 18.

**Table 18. Theoretical Framework, Systemic stratum. Interdependence.**

Definition	<b>H<sub>26</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>27</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>28</sub>: A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context</b>
The number and character of dependencies extending across jobs, functions or organisational boundaries related to tasks, goals, information, resources, approval or learning.	(Bell and Kozlowski, 2002; Elkins and Keller, 2003; Hogg, Van Knippenberg and Rast, 2012a; Lavie, Stettner and Tushman, 2010; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Yukl, 2012)	(Bell and Kozlowski, 2002; Benner and Tushman, 2003; Howard-Grenville, 2005; Marta, Leritz and Mumford, 2005; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Pearce, 2004; Salas, Sims and Burke, 2005; Van De Ven, Delbecq and Koenig, 1976)	(Elkins and Keller, 2003; Hogg, Van Knippenberg and Rast, 2012a; Lavie, Stettner and Tushman, 2010; von Krogh, Nonaka and Rechsteiner, 2012; Yukl, 2012)

Source: Literature review.

## 6.6 Resource constraints

Morgeson and Humphrey (2008) refer to findings that a lack of resources can hinder job performance, which conversely implies that resource availability enables performance. Johns (2006) found that resources constitute an essential part of the task context encompassing job resources and personal resources. Johns' (2006) split between job and personal resources corresponds with the Job Demands-Resources literature (Bakker and Demerouti, 2017). In this thesis's conceptualisation, the systemic level includes the job resources, while the personal resources reside in the intrinsic and social strata. Johns (2006) and Morgeson and Humphrey (2008) together indicate that it is relevant to influence both resource availability and allocation to promote performance. Cogliser and Schriesheim concur and posit that *"different environmental conditions, particularly resource positions, impact the nature of the leadership challenge"* (Gibbons 1992, in Cogliser and Schriesheim, 2000, p. 494). Cogliser and Schriesheim (2000) suggest that resource availability is related to organisational power, pointing to an effect of the leader's discretionary power to influence resource allocation. Lavie, Stettner and Tushman (2010) highlighted resource allocation as a primary means for guiding efforts towards either exploration or exploitation. Concurring, Benner and Tushman (2003) exemplified how resource allocation guides the prioritisation of efforts directed towards new or existing customers. Also, Martins and Terblanche (2003) argued that innovation demands available resources. These authors stress the importance of resource allocation, which rests upon the precondition that resources can be made available.

Lavie, Stettner and Tushman (2010) addressed resource availability and reported that resource munificence promotes explorative performance. These findings are nuanced by Shalley and Gilson (2004). They found that access to material resources is conducive to creativity, but conversely, also that resource scarcity helps spur creative solutions to get things done (Shalley and Gilson, 2004). Morgeson and Humphrey (2008) report similar findings that resource constraints can lead to finding new solutions. In this vein, an interesting part of the resource availability dilemma seems related to the stretch in the organization (Ghoshal and Bartlett, 1994). Shalley and Gilson (2004) found that abundant resources can lead to not feeling a stretch, i.e. no urge to rethink the current state; however, also that such complacency can be offset with clear creativity goals. Lavie, Stettner and Tushman (2010) report related dynamics where increased competitive pressure leads to a reduction of slack to finance innovation but also leads to increased pressure for exploration. Concurring, Raisch and Birkinshaw (2008) reported findings that resource availability allows pursuing exploration and exploitation simultaneously; while fewer resources demand a more focused approach to perform in either mode.

Also, fewer resources influence the degrees of freedom to experiment and uphold knowledge capture, documentation and dissemination processes (Raisch and Birkinshaw, 2008). They summarised the findings to suggest that “*organisational ambidexterity may be contingent on the availability of sufficient resources*” (Raisch and Birkinshaw, 2008, p. 395). In the same vein, Elkins and Keller (2003) reported empirical findings that the leader could strengthen a climate for explorative learning by ensuring slack resources. This implies that actively shaping context to free up such resources is important if the organisational intention is exploration. As indicated by the above authors, the leader must understand how resources are dedicated to the core operation and which resource slack is addressable (Katz and Kahn, 1978; Lavie, Stettner and Tushman, 2010). Slack concerns unabsorbed slack, i.e. uncommitted deployable assets; and, absorbed slack, i.e. resources currently dedicated to activities that could be recovered through optimisation or reprioritisation (Lavie, Stettner and Tushman, 2010). Further underlining the importance of deliberate resource allocation, Lavie, Stettner and Tushman (2010) also argue that excessive absorbed slack may hinder adaptive performance and have attenuating effects on the climate for diligence and discipline. Together, these findings indicate that a leader can shape the context by increasing or decreasing addressable resource constraints. In sum, resource constraints in the leadership context concern what is found in table 19. As resources constraints is the last factor identified in the systemic stratum, the next chapter addresses contextual factors in the social stratum.

**Table 19. Theoretical Framework, Systemic stratum. Resource constraints.**

<b>Definition</b>	<b>H<sub>29</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>30</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>31</sub>: A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context</b>
The availability of the resources that are necessary to operate. Including available resources and resources which can be freed up through optimisation or prioritisation.	(Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008)	(Cogliser and Schriesheim, 2000; Johns, 2006; Lavie, Stettner and Tushman, 2010; Martins and Terblanche, 2003; Morgeson and Humphrey, 2008; Shalley and Gilson, 2004)	(Benner and Tushman, 2003; Cogliser and Schriesheim, 2000; Elkins and Keller, 2003; Johns, 2006; Katz and Kahn, 1978; Lavie, Stettner and Tushman, 2010; Shalley and Gilson, 2004)

Source: Literature review.

# Chapter Seven

## 7. Social structures

Organisational climates are shared perceptions of the rules, regulations, procedures and policies, and the behaviours expected, rewarded and supported in an organisation (Day, Griffin and Louw, 2014; Denison, 1996; Ostroff and Schulte, 2014; Schneider, Ehrhart and Macey, 2013). Relatedly, yet distinct, culture pertains to the values, assumptions and beliefs held by the members in an organisation (Denison, 1996), which is considered value composition and diversity in the intrinsic stratum in the leadership context. This duality between culture and climate relates to the social identity theory with the collective self residing within the individual and collective shared group prototype (Gardner et al., 2005; Hogg, Van Knippenberg and Rast, 2012b; Uhl-Bien et al., 2014). The relevance of climate for leadership context remains clear as the shared perceptions drive attitudes and work performance behaviour through the collective prototyping processes (Gardner et al., 2005; Kuenzi and Schminke, 2009; Schneider, Ehrhart and Macey, 2013). Equally important is intrinsic prototyping, which is addressed in the intrinsic stratum. A move towards strategic climates related to desired organisational outcomes, such as the service climate, has emerged in the climate literature. The emphasis in the literature supports the importance of establishing a line of sight from the organisational intentions to the policies and the climates in focus (Schneider, Ehrhart and Macey, 2013). In addition, climates related to the organisation's internal functioning exist, such as the justice or empowerment climates (Schneider, Ehrhart and Macey, 2013).

Together, these two main groups, climates related to the desired value creation or the protection of value (outcomes), and climates related to how an organisation functions (process), formed the starting point for the literature review in this stratum. Interestingly, Schneider, Ehrhart and Macey (2013) reported empirical support for the influence of process climates on the emergence of outcome climates, which warrant that both are parts of the leadership context. Turning to the reviewed literature, and through the lens of searching for climates focused on outcomes or process, four groups emerged; 1) Adaptive; 2) Performance; 3) Support; and, 4) Protective climates, each comprising several climates. Table 20 displays the clustering, which is elaborated in the following sections reviewing the literature.

**Table 20. Climate groups and climates in the social stratum**

Climate group	Climates in the leadership context
Adaptive climates	<ul style="list-style-type: none"> <li>• climate for exploitative learning</li> <li>• climate for explorative learning</li> <li>• climate for change</li> </ul>
Performance climates	<ul style="list-style-type: none"> <li>• climate for diligence and discipline</li> <li>• climate for goal-path clarity and stretch</li> <li>• climate for service</li> </ul>
Supportive climates	<ul style="list-style-type: none"> <li>• climate for collaboration</li> <li>• climate for productive discussion</li> <li>• climate for fairness and justice</li> <li>• climate for empowerment</li> </ul>
Protective climates	<ul style="list-style-type: none"> <li>• climate for safety</li> <li>• climate for ethical conduct</li> <li>• climate for sustainability</li> </ul>

Source: The literature content analysis

The climate strength concept developed in the conceptual framework, see page 42, allows an overall definition of 'climate'. See table 21 below. The definition is the foundation for the subsequent review of the literature pertaining to the climates listed above.

**Table 21. Theoretical Framework, Social stratum. Climates overall.**

Definition	H <sub>32</sub> : Has causal powers to help or hinder leadership and/or work performance	H <sub>33</sub> : A climate can be strengthened through leadership interventions influencing the expectations, enactment, alignment, and agreement related to climate-relevant behaviour and practices
Organisational climates are the shared perceptions of how clear the official policies, instructions and guidelines are; how well known and accepted in the organisation they are; and how well aligned the policies, instructions and guidelines are. Moreover, which habits, behaviour and practices are accepted; and, how well people in the organisation act in line with the official policies, instructions, and guidelines.	(Johns, 2006; Johns, 2017; Judge and Zapata, 2015; LePine <i>et al.</i> , 2002b; Meyer, Dalal and Hermida, 2010; Schneider, Ehrhart and Macey, 2013). Also, see the sources listed for each hypothesis below.	(Denison, 1996; Dinh <i>et al.</i> , 2014; Dragoni, 2005; Howard-Grenville, 2005; Kuenzi and Schminke, 2009; Ostroff, Kinicki and Muhannad, 2012; Patterson <i>et al.</i> , 2005; Raisch and Birkinshaw, 2008). Also, see the sources listed for each hypothesis below.

Source: Literature review.



## 7.1 The group of adaptive climates

London and Mone (2014) reviewed organisational climate literature related to performance management in the *Oxford Handbook of Organisational Climate and Culture*. They found that adapting is a crucial feature for teams to perform. Their review underlines that the leader must understand how to stimulate the needed adaptive climates, which corresponds with the reviewed literature. Several authors concern themselves with climate for learning (Dragoni, 2005; Jung *et al.*, 2009; von Krogh, Nonaka and Rechsteiner, 2012) related to both exploitation and exploration. Organisational learning is also identified as a core process in the ambidexterity literature for both exploration and exploitation (Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Boumgarden, Nickerson and Zenger, 2012; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008). Through a review of organisational ambidexterity literature, Raisch and Birkinshaw (2008) found support for two co-existing, yet different learning processes; exploitative and explorative learning. The difference concerns how learning takes place and the newness of the knowledge involved. Exploitative learning is focused on reusing existing knowledge, while explorative learning concerns more knowledge creation (Berson *et al.*, 2006; March, 1991; Raisch and Birkinshaw, 2008). Nevertheless, von Krogh, Nonaka and Rechsteiner (2012) found that knowledge creation, capture and dissemination are vital in both learning modes, indicating the existence of an intersection between the climates for exploitative learning and explorative learning. The existence of an intersection is confirmed by Jansen, Van den Bosh and Volberda (2006) who found that effective leader behaviour for both exploiting and exploring is facilitating collective learning and developing a collegial system of guidance. In continuation, they found that the organisational connectedness is a critical driver in both types of learning. Although the learning processes are related, the content analysis indicated three related, yet different climates in the adaptive group; climate for exploitative learning; climate for explorative learning; and, climate for change. The following sections elaborate on these climates and their causal tendencies.

### 7.1.1 Adaptive climates: Climate for exploitative learning

The first cluster pertains to the climate for exploitative learning. It concerns refinement, development and extension of existing operation building on known competences, business models, technologies and ways of operating (Benner and Tushman, 2003; Berson *et al.*, 2006; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008).

The shared expectations to and enactment of practices that drive up efficiency through continuous learning lies at the heart of the climate for exploitative learning (March, 1991). Patel, Pettitt and Wilson (2012) reported such exploitative practices as improving work processes, improving service quality, reducing errors, or optimising quantitative throughput. These findings confirm that exploitative learning pertains to utilising existing knowledge and revolves around how embedded transferring knowledge and best practices is (March, 1991). Berson et al. (2006) pointed to a valuable knowledge transfer mechanism, which aligns well with other authors (Andriopoulos, 2001; Mannix and Neale, 2005; Patel, Pettitt and Wilson, 2012). It concerns that to learn; there needs to be diversity in the knowledge content, i.e. something to learn, but also a frame of reference for the learner to attach the new knowledge into practice. Interestingly, this mechanism is identified both in exploration and exploitation. However, in exploitative learning, it is already existing institutionalized knowledge being transferred and utilised for optimisation within existing practices which comes out of the diversity (Berson *et al.*, 2006; March, 1991; Shalley and Gilson, 2004). Moreover, Berson et al. (2006) pointed to the same mechanism at the organisational level, where cross-functional teams need to strike the right balance between perspectives-diversity to spur knowledge creation (explorative learning) and knowledge transfer of already institutionalized knowledge (exploitative learning). In continuation, it is both the orchestration of learning through organisational structures and processes and the emergence of self-driven collaboration to learn, i.e. climate, that are critical for both types of learning (Berson *et al.*, 2006; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012). Relatedly, Shalley and Gilson (2004) emphasised that ongoing contact with external others is positively related to learning. In the same vein, Hogg, Van Knippenberg and Rast (2012a) highlighted the potential of boundary spanning learning activities. Also, Lavie, Stettner and Tushman (2010) found that boundary-spanning activities across organisations promote exploration and exploitation. In sum, releasing the boundary-spanning potential depends on a climate promoting the learning (Berson *et al.*, 2006; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012).

Throughout their review, von Krogh, Nonaka and Rechsteiner (2012) reiterate strong empirical support that leaders must take an active role in shaping context combined with direct leader interventions to drive organisational learning. Other authors concur (Dragoni, 2005; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008). That the emergence of the learning climate is related to the leader practices is also stressed by Dragoni (2005), who linked the psychological learning climate to the emergence of the social learning climate.

Dragoni (2005) emphasised the importance of pattern orientation (frequency) and pattern variability (consistency) of leader behaviour in the engineering of an effective climate for learning. Von Krogh, Nonaka and Rechsteiner (2012) agreed and proposed that leadership in organisational learning ranges from centralised to distributed leadership; arguing from the literature that the latter is positively related to organisational learning. They exemplified distributed leadership behaviour conducive to learning, i.e. shifting between being a leader and a follower; joint sense-making; relating work to the overall organizational goals; helping behaviour; guiding; teaching; and, mentoring. In continuation, von Krogh, Nonaka and Rechsteiner (2012) referred to extant studies which found team behaviours conducive to learning like raising ideas; interpreting together; questioning to lead others to reflect and learn; formalising knowledge and building upon it; and, discussing pressing issues, problems and ideas. During exploitative learning, these practices would be less concerned with knowledge creation and more with experience capture, dissemination and application (Berson *et al.*, 2006; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012). Learning together leads to a growing interdependence spurred by the value members experience in collaborating on solving the task, which increases the motivation to participate, resulting in a 'pledged' group with high levels of cohesion (von Krogh, Nonaka and Rechsteiner, 2012). The emergence of a pledged group relates to a strong climate for collaboration, which is discussed later, indicating intensifying effects between the climates. Together, exploitation is driven by frequent and consistent knowledge capture, dissemination, application in the work unit and across boundaries resulting in continuous improvements. In summary, see table 22.

**Table 22. Theoretical Framework, Adaptive climates. Climate for exploitative learning.**

Definition	<b>H<sub>34</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>35</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition... when it comes to learning to refine, develop, improve, and extend existing operation continuously.	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Hogg, Van Knippenberg and Rast, 2012a; Lavie, Stettner and Tushman, 2010; London and Mone, 2014; Mannix and Neale, 2005; March, 1991; Patel, Pettitt and Wilson, 2012; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012)	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Dragoni, 2005; Lavie, Stettner and Tushman, 2010; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012)

Source: Literature review.

### 7.1.2 Adaptive climates: Climate for explorative learning

The second cluster focuses on climates for innovation (Berson *et al.*, 2006; Elkins and Keller, 2003; Jung *et al.*, 2009; Martins and Terblanche, 2003; Shalley and Gilson, 2004), which converge with climates for creativity and experimenting (Andriopoulos, 2001); both addressing explorative learning. Explorative learning concerns creating future business practices through innovation and experimentation; by applying new competencies, technologies and ways of working (Benner and Tushman, 2003; Berson *et al.*, 2006; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008).

Martins and Terblanche (2003) summarised empirical support for four types of organisational behaviour that encourage innovation, converging to other authors' findings in the reviewed literature. Firstly, the practice of risk-taking and mistake handling correspond with the positive effects of participative safety (Andriopoulos, 2001; Berson *et al.*, 2006; Raisch and Birkinshaw, 2008; Shalley and Gilson, 2004) and justice/fairness climate (Shalley and Gilson, 2004). Secondly, the practice of conflict handling (Martins and Terblanche, 2003) align well with positive effects on explorative learning from productive discussions and constructive conflicts (Andriopoulos, 2001; Dionne *et al.*, 2004; Mannix and Neale, 2005; Marta, Leritz and Mumford, 2005; Patel, Pettitt and Wilson, 2012). Thirdly, a competitive climate conducive to innovation (Martins and Terblanche, 2003) aligns with findings on the positive effects on innovation from stretch and goal orientation (Dionne *et al.*, 2004; Dragoni, 2005; Raisch and Birkinshaw, 2008). Finally and fourth, the practices of idea generation (Martins and Terblanche, 2003) align with similar practices reported to be effective in the first stages of exploration (Andriopoulos, 2001; Berson *et al.*, 2006; Crossan, Lane and White, 1999; Rosing, Frese and Bausch, 2011; Shalley and Gilson, 2004).

The level of enactment of these behaviours is consistently reported by the above authors to be related to the strength of the climate. Further to the influence of climate, Berson *et al.* (2006) summarized three broad characteristics conducive to learning. To start with, openness, which pertains to access and flow of information, tolerance, and openness to diverse thinking (Berson *et al.*, 2006) which align with Martins and Terblanche's (2003) idea generation and corresponds with research on diversity in teams (Mannix and Neale, 2005); and, effective team collaboration (Patel, Pettitt and Wilson, 2012). Next, participation, which encompasses involvement in decision-making; learning commitment; constructive task conflicts; and, autonomy (Berson *et al.*, 2006), which aligns with other authors' findings (Andriopoulos, 2001; Martins and Terblanche, 2003; Shalley and Gilson, 2004).

Lastly, psychological safety, which was found as a pivotal driver for explorative learning revolving around trust, risk-taking and support (Berson *et al.*, 2006) corresponding with the findings above (Martins and Terblanche, 2003; Shalley and Gilson, 2004) and the discussion of psychological safety in the later section on climate for collaboration. Across these perspectives on climate for explorative learning, it remains clear that idea generation, experimentation and diverging perspectives are core facilities, which, in turn, demands risk-taking acceptance, conflict handling and a supportive work climate.

Both Berson *et al.* (2006) and Shalley and Gilson (2004) reported several leader practices conducive for creativity in the early phases of exploration. That is, facilitating diversity in perspectives and skills, engaging high-ability members, creating an atmosphere where it is safe to come up with ideas and tolerate and utilise mistakes for learning. In addition, allocating time for learning; setting up meetings with other relevant departments, internal or external experts, or people who interact in the process to challenge and develop the status quo (Berson *et al.*, 2006; Shalley and Gilson, 2004). Furthermore, Andriopoulos (2001) and Shalley and Gilson (2004) stressed that time is a critical resource if creativity is to occur. Also, that exploration fosters active leadership as the comfort of not challenging the status quo sometimes makes employees stick to being busy with non-creative tasks. This need for active leadership in shaping a climate where people leave their comfort zone and engage in knowledge creation, capture and dissemination is also supported in the knowledge management literature (von Krogh, Nonaka and Rechsteiner, 2012). Summarising the discussion, see table 23.

**Table 23. Theoretical Framework, Adaptive climates. Climate for explorative learning.**

Definition	<b>H<sub>36</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>37</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ... when it comes to learning to create future business practices through innovation and experimentation; by applying new competencies, technologies and ways of working.	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Crossan, Lane and White, 1999; Dionne <i>et al.</i> , 2004; Dragoni, 2005; London and Mone, 2014; Mannix and Neale, 2005; Marta, Leritz and Mumford, 2005; Martins and Terblanche, 2003; Patel, Pettitt and Wilson, 2012; Raisch and Birkinshaw, 2008; Rosing, Frese and Bausch, 2011; Shalley and Gilson, 2004)	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Crossan, Lane and White, 1999; Rosing, Frese and Bausch, 2011; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012)

Source: Literature review.

### 7.1.3 Adaptive climates: Climate for change

The third cluster in the adaptive climates group concerns climates for openness to change (Cogliser and Schriesheim, 2000; Jung *et al.*, 2009), which resemble climates for adaptability (Michie and West, 2004; Pawar and Eastman, 1997; Salas, Sims and Burke, 2005). These climates address two clusters. Firstly, attitudes related to the persistence of habits influencing the ability to shift between explorative and exploitative behaviour. Secondly, attitudes influencing behaviour responding to ‘imposed’ change.

Overall, Michie and West (2004) reported empirical findings positively associating a climate of adaptability to financial growth. Also, that the emergence of such a climate is related to promoting teamwork; involvement in decision making; empowerment; gain-sharing schemes; and, participation in continuous improvements. Related to adaptability, Lavie, Stettner and Tushman (2010) reported challenges when an organisation with path dependency in one mode of learning attempts to assume the other mode to get different results. Path dependency is the self-reinforcing mechanisms creating inertial pressures to maintain course and refrain from changing (Gibson and Birkinshaw, 2004; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008). Path dependency stems in part from the alignment-based strength; from structural inertia (Raisch and Birkinshaw, 2008); or, from embeddedness of routines (Howard-Grenville, 2005); and, in part, from the climate aggregated from the individual openness to change (Griffin, Neal and Parker, 2007; Jundt, Shoss and Huang, 2015).

The ability to change learning modes is related to adaptive performance (Jundt, Shoss and Huang, 2015) and to ambidexterity, which refers to a unit’s ability to let explorative and exploitative practices coexist; (Boumgarden, Nickerson and Zenger, 2012; Lavie, Stettner and Tushman, 2010). Lavie, Stettner and Tushman (2010) pointed out important antecedents to the emergence of a strong climate for learning and shifting between learning modes. They emphasised developing absorptive capacity, i.e. “*ability to assess the value of external knowledge, internalise it and apply it*” (p. 121), pointing to important leadership interventions. That is deliberate resource allocation, shaping the organisational structure, reducing risk aversion, and securing performance feedback processes; implying that absorptive capacity is a significant factor in the climate for change. Specifically, Lavie, Stettner and Tushman’s review (2010) found the strength of the organisational climate to exercise significant influence promoting exploration or exploitation and creating undesired path dependence.

The other part of climate for change pertains to the collective attitudes towards change 'imposed' by changes in the external environment (Osborn, Hunt and Jauch, 2002) or business intentions (Ghoshal and Bartlett, 1994). Martins and Terblanche (2003) noted that innovation often leads to change, but not all change is innovation. This indicates that a climate for change exists independent but related to the climates for learning<sup>x</sup>. Salas, Sims and Burke (2005) introduced adaptability as one of five core components for effective teams and defined it as altering a course of action in response to changing conditions. Further tracking of the literature on adaptability expanded the understanding. In the adaptive performance literature, Pulakos et al. (2000) and Pulakos et al. (2002) conceptualised eight dimensions of adaptive performance which could be considered components in the climate for change: handling emergencies or crises; handling work stress; solving problems creatively; dealing with uncertain and unpredictable work situations; learning work tasks, technologies, and procedures; demonstrating interpersonal adaptability; demonstrating cultural adaptability; and demonstrating physically oriented adaptability. It corresponds well with Jundt, Shoss and Huang (2015), who described adaptive performance as behaviours that individuals "*enact in response to or anticipation of changes relevant to job-related tasks*" (p. 55). Hence, adaptiveness relates to learning and adapting to imposed change (Jundt, Shoss and Huang, 2015). The distinction supports the difference and relatedness between the climates for learning and the two parts of the climate for change.

An organisational angle to the climate for 'imposed' change is provided by Pawar and Eastman (1997), who synthesised a continuum of organisational receptivity to transformational leadership. Considering organisational context as moderating the effectiveness of transformational leadership led to a receptivity continuum ranging from a 'Negative' to a 'Positive' contextual influence. These effects were described as flowing from the organisational intentions; the level of openness to the external environment; the organisational structure; and the culture (Pawar and Eastman, 1997). In continuation, Pawar and Eastman (1997) suggested that a leader should actively shape context by either *harnessing* the context in support of the leadership or *confronting* the context to change towards a better context-leadership-effect fit. Pawar and Eastman (1997) exemplify the importance of climate for change. They implicitly argue that besides reaching a temporary 'fit', the leader should stimulate the emergence of a context conducive to change, i.e. build receptivity. Together the literature suggests that the climate for change pertains to the perceptions around shifting between learning modes and collective perceptions to other change. The climate for change and its effects in the leadership context are displayed in table 24 on the following page.

**Table 24. Theoretical Framework, Adaptive climates. Climate for change.**

Definition	<b>H<sub>38</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>39</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ...when it comes to shifting between exploration and exploitation; adapting to externally imposed change; or, participating in internally driven change.	(Gibson and Birkinshaw, 2004; Griffin, Neal and Parker, 2007; Howard-Grenville, 2005; Jundt, Shoss and Huang, 2015; Lavie, Stettner and Tushman, 2010; London and Mone, 2014; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005)	(Boumgarden, Nickerson and Zenger, 2012; Lavie, Stettner and Tushman, 2010; Michie and West, 2004; Pawar and Eastman, 1997; Salas, Sims and Burke, 2005)

Source: Literature review.

The climate for change was the last climate in the group of adaptive climates, and in the following section the attention turns to the group of performance climates.

## 7.2 The group of performance climates

Performance climates, along with leadership agency, are identified as critical enablers of the formal performance practices implemented in many companies (London and Mone, 2014). This makes the performance climates an important part of the leadership context. Three clusters were identified in the reviewed literature. A climate for diligence and discipline, which come together with a climate for goal-path clarity and stretch, and a climate for service, form the group of performance climates. These climates and their effects are discussed in the following sections.

### 7.2.1 Performance climates: Climate for diligence and discipline

The first cluster reveals convergence in the literature between the climates for performance (Dragoni, 2005; Jung *et al.*, 2009; Salas, Sims and Burke, 2005); for efficiency (Pawar and Eastman, 1997); and, for discipline (Raisch and Birkinshaw, 2008). When pursuing exploitation, a climate attending to diligence in following standardised routines; acting with the discipline to achieve compliance; and, coordinating via predetermined mechanisms is conducive (Pawar and Eastman, 1997). In such a climate, leaders will be focused on the attainment of well-defined goals; the optimal utilisation of the resources; and, the focus on optimisation, best practice sharing and optimal task performance (Pawar and Eastman, 1997).



From another vantage point on diligence, Dragoni (2005) included the climate for avoiding failure in her work on goal orientation climate. This climate centres on the attitudes guiding behaviour when it comes to detecting errors, deterring future mistakes and avoiding the display of incompetence (Dragoni, 2005). Dragoni (2005) linked the emergence of such a climate to the leadership behaviours such as close attention to mistakes, deviations and substandard performance; punishment; continuous evaluation; and, playing safe when allocating tasks to team members. These findings are consistent with the leadership emphasis during periods of efficiency focus reported by Pawar and Eastman (1997) and indicate that a climate for avoiding failure would drive diligence conducive to exploitation. Conversely, expectations and reinforced behaviour when it comes to avoiding errors at any cost would attenuate a climate for explorative learning (Pawar and Eastman, 1997).

Salas, Sims and Burke (2005) introduced 'team orientation' as one of the "Big Five" components influencing team effectiveness. Salas, Sims and Burke (2005) proposed that mutual performance monitoring; soliciting feedback to correct mistakes; facilitating self-correction; following if things run as expected; holding each other accountable; and, enhancing following procedures are elements in 'team orientation'<sup>xi</sup>. Hence, it seems that 'team orientation' concerns diligence and discipline. In their review of the climate literature related to performance management, London and Mone (2014) confirm that mutual monitoring; peer feedback; continuous improvement; holding each other accountable; and, following prescribed work methods are important parts of a climate for performance. Turning to the job performance literature, complying with rules and procedures is part of the OCB-ranges for many authors (Brief and Motowidlo, 1986; Koopmans et al., 2011; Motowidlo, Borman and Schmit, 1997; Organ, 1997; Podsakoff et al., 2000; Viswesvaran, Schmidt and Ones, 2005). The substantial support for the importance of diligence and compliance in the job performance literature suggests that a strong climate for diligence and discipline promotes work performance (Podsakoff *et al.*, 2000). However, importantly, although discipline is closely related to exploitative practices, it also relates to explorative practices (Raisch and Birkinshaw, 2008). Raisch and Birkinshaw (2008) found that contextual ambidexterity demands that team members judge, decide and follow the most appropriate exploitative or explorative practice for any given task, emphasising the importance of a strong discipline climate. Leadership interventions promoting such a disciplined climate are: establishing and gaining acceptance on clear standards and expectations; management by commitments; consistent application of sanctions; measurement of performance; fast-cycle feedback; and, follow-through on accountabilities (Ghoshal and Bartlett, 1994; Gibson and Birkinshaw, 2004). Taken together, see table 25 below pertaining to the climate for discipline and diligence.

**Table 25. Performance climates. Climate for diligence and discipline.**

Definition	<b>H<sub>40</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>41</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ... when it comes to meeting expectations; delivering on commitments; holding each other accountable; and, diligently complying with standards.	(Brief and Motowidlo, 1986; Dragoni, 2005; Koopmans <i>et al.</i> , 2011; London and Mone, 2014; Motowidlo, Borman and Schmit, 1997; Organ, 1997; Pawar and Eastman, 1997; Podsakoff <i>et al.</i> , 2000; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005; Viswesvaran, Schmidt and Ones, 2005)	(Dragoni, 2005; Ghoshal and Bartlett, 1994; Gibson and Birkinshaw, 2004; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005)

Source: Literature review.

### 7.2.2 Performance climates: Climate for goal-path clarity and stretch

The second cluster pertains to climates for goal orientation (Dinh *et al.*, 2014; Dragoni, 2005; Elkins and Keller, 2003; Salas, Sims and Burke, 2005); and, for stretch and job challenge (Dragoni, 2005; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008).

From the literature, Elkins and Keller (2003) confirmed the well-established goal-effort-performance linkage in path-goal theory (House, 1996), arguing that path-goal clarity promotes efforts leading to goal attainment. Dinh *et al.* (2014) confirmed the positive effects of path-goal clarity. House (1996) clarified that a leader is responsible for establishing clear linkages between effort and goal attainment “*to the extent that the environment does not provide clear causal linkages*” (p. 326), indicating two underlying assumptions. Firstly, that the goals are clear; and, secondly, that the leader should promote an environment where the goal-path linkages are understood. Patel, Pettitt and Wilson (2012) concurred and found that goal-path clarity in conjunction with the absence of competing priorities is conducive to collaboration. Similar support for the positive effects of goal clarity on performance is found in research on leadership and follower performance (Avolio *et al.*, 2004b; Marta, Leritz and Mumford, 2005). Additionally, in line with other reviews (Dionne *et al.*, 2004; Dragoni, 2005; Martins and Terblanche, 2003; Raisch and Birkinshaw, 2008), von Krogh, Nonaka and Rechsteiner (2012) found understanding the higher goals and purpose as a motivating and direction-setting factor in teams’ knowledge creation.

Raisch and Birkinshaw (2008) emphasised the importance of a shared vision to the emergence of contextual ambidexterity, where members themselves choose practices and allocate resources based on their continuous goal and contribution analysis. In the team literature, Salas, Sims and Burke (2005) found that setting the team goals above their own goals is vital for the teams' effectiveness. Also, that the strength of the goal-path climate is a prerequisite for the team to understand the best utilisation of team resources, and the path to handle the constraints hindering performance (Salas, Sims and Burke, 2005). Pawar and Eastman (1997) stressed the importance of "*bonding individual and collective interest*" (p. 83) and pointed out the importance of goal focus as a driver of efforts necessary during both organisational efficiency and adaptation periods. The proposition that a leader should shape and align context to support the business purpose is well supported (Chatman and Cha, 2003; Dragoni, 2005; Schneider, Ehrhart and Macey, 2013), and also with these authors, the shaping argument rests upon an assumption about a clear goal and contribution understanding. These findings suggest that a climate for performance is heavily influenced by the clarity of goals (expectations), and in turn, by understanding which efforts deliver on these goals (enactment). Besides the support for clarity of goals and the importance of the line of sight between organisational intentions and own contribution, two other components emerged. Building on decades of literature, and confirmed in this thesis' literature review, Dragoni (2005) introduced *mastery orientation* and *performance orientation* as two core components of goal orientation.

The individual's mastery orientation pertains to an individual's propensity to achieve mastery within one or more competencies related to self-efficacy (Bandura, 1986; Dragoni, 2005; Judge and Zapata, 2015). Dragoni (2005) argues that individual dispositions are the starting points for shaping the climate pertaining to collective mastery and team efficacy. Dragoni (2005) described that in such a climate, the leader directs attention to employee development; set goals for competence development; views failure as learning opportunities; provides constructive feedback; allocates resources for learning and development; and, assigns jobs to stretch and develop employees. Along the same lines, Avolio et al. (2004b) identified self-efficacy flowing from mastery as mediating the relationship between transformational leadership and organisational commitment. Also, Gardner et al. (2005) agree about the positive effects of experiencing mastery as bolstering the feelings of competence and confidence, resulting in performance. Patel, Pettitt and Wilson (2012) concur that mastery is a performance driver by pointing out how developing new competencies increase productivity and the quality of working life.

The work design literature recognises that people move towards jobs that fit their perceptions of their abilities, indicating that thriving and performing as a consequence of experienced mastery is a part of this drive (Bakker and Demerouti, 2007; Morgeson and Humphrey, 2008). Further support to that 'becoming' better in itself as a collective perception is a performance driver came from London and Mone (2014), who highlighted mastery orientation as a driver of performance improvement. In sum, these findings indicate that a stretch climate can be driven by a shared perception of constantly honing mastery, striving to become even better at the profession.

Concerning *performance orientation*, Dragoni (2005) highlighted a climate where outperforming others; demonstrating abilities; and, the normative evaluation of performance and sharing these data is expected and valued. The leadership practices related hereto are close attention to performance; feedback including a comparison to others; using the high performers as role models; rewarding performance and allocating tasks to high performers (Dragoni, 2005). Martins and Terblanche (2003) concur that certain competitiveness in the climate can be positive and conducive to innovation. These findings align well with other authors reporting positive effects from stretch and goal orientation on innovation (Dionne *et al.*, 2004; Dragoni, 2005; Raisch and Birkinshaw, 2008). In their research on collaborative working, Patel, Pettitt and Wilson (2012) found *performance orientation* to be one of the overarching factors and reported behaviours like achieving goals, keeping deadlines, delivering profits, saving time, and meeting quantitative or qualitative requirements. These findings warrant the existence of a stretch climate factor pertaining to a voluntary drive among team members to drive the behaviours most conducive to performance. Raisch and Birkinshaw (2008) concur and found stretch imperative for creating competitive advantage and an essential part of enabling contextual ambidexterity. Gibson and Birkinshaw (2004) elaborated Ghosal and Bartlett's (1994) conceptualisation of stretch as attributes of a climate where 1) members voluntarily push for more ambitious goals; 2) stretch the expectations to each other and challenge each other to go further; and, 3) build a collective identity of pursuing a shared ambition and connect the organisation's purpose to personal meaning. These three stretch attributes seem to cover both *mastery orientation* and *performance orientation*, and at the same time, indicate that mastery-driven stretch is related to the organisational purpose. The latter aligns well with the argument from work design literature that people gravitate towards jobs where they can action their mastery (Morgeson and Humphrey, 2008). Together, the theoretical framework for climate for goal-path clarity and stretch is summarised in table 26 below. After the table, the discussion turns to a review of the climate for service, which is the last in the group of performance climates.

**Table 26. Performance climates. Climate for goal-path clarity and stretch.**

Definition	H <sub>42</sub> : Has causal powers to help or hinder leadership and/or work performance	H <sub>43</sub> : The climate can be strengthened through leadership interventions
See climate definition ... when it comes to goals, paths, and goal-path linkages; continuously improving our professional mastery; and, stretching ambitions always to perform better.	(Avolio <i>et al.</i> , 2004b; Bakker and Demerouti, 2007; Dionne <i>et al.</i> , 2004; Dragoni, 2005; Elkins and Keller, 2003; Gardner <i>et al.</i> , 2005; Ghoshal and Bartlett, 1994; Gibson and Birkinshaw, 2004; House, 1996; London and Mone, 2014; Marta, Leritz and Mumford, 2005; Martins and Terblanche, 2003; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005)	(Avolio <i>et al.</i> , 2004b; Bakker and Demerouti, 2007; Chatman and Cha, 2003; Dinh <i>et al.</i> , 2014; Dragoni, 2005; Elkins and Keller, 2003; House, 1996; Marta, Leritz and Mumford, 2005; Morgeson and Humphrey, 2008; Pawar and Eastman, 1997; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005; Schneider, Ehrhart and Macey, 2013)

Source: Literature review.

### 7.2.3 Performance climates: Climate for service

The third climate in the group of performance climates is the climate for service, which was only represented in one review article (Schneider, Ehrhart and Macey, 2013). However, tracking of authors from this article revealed robust findings warranting the inclusion in the leadership context.

Schneider, Ehrhart and Macey (2013) reported that stronger service climates are positively related to higher customer satisfaction and financial performance; and, that leadership exercise a significant influence on the emergence. Yagil (2014), who provided an overview of the major research findings on service climate in *The Oxford Handbook of Organizational Climate and Culture* concurs. Furthermore, Schneider, Ehrhart and Macey (2013) reported that the effects of service climate are stronger when customer contact is high and when the product or service in focus is intangible. Together it indicates intensifying effects from contextual factors from the determinant stratum. Schneider, Ehrhart and Macey (2013) also reported that for service climate to yield effects, it needs to be supported by a climate for collaboration, a finding supported by other authors (Bowen and Schneider, 2013; Hong *et al.*, 2013; Yagil, 2014). Tracking Schneider's work revealed that the relations between a strong service climate resulting in service performance, and supportive climates resulting in employee engagement was established with the Service-Profit Chain (Bowen and Schneider, 2013; Heskett *et al.*, 1994).

The Service-Profit Chain established relations between job design, rewards, employee satisfaction and employee performance influencing external service delivery; which was found to result in customer satisfaction, customer loyalty, revenue growth and profitability (Heskett *et al.*, 1994). Since Heskett *et al.* (1994), the links between service climate and external service performance have been researched extensively, and a positive link confirmed<sup>xii</sup> (Bowen and Schneider, 2013; Hong *et al.*, 2013; Yagil, 2014). A part of why service climate is relevant to the leadership context is that emergence of a strong service climate calls for continued leader reinforcement (Bowen and Schneider, 2013). Service is more intangible than products; usually produced and consumed in a ‘moment of truth’; and, it often requires the participation of the customer (Yagil, 2014). In turn, this demands the stimulation of a strong service climate, which will help the right service excellence occur in the ‘moments of truth’ where there is no rewind button and the leader is not present (Bowen and Schneider, 2013; Hong *et al.*, 2013; Yagil, 2014). Bowen and Schneider (2013) reported that leaders setting standards for service quality; role modelling; recognising service performance; securing resources; and, removing obstacles stimulate the emergence. Relatedly, Yagil (2014) reported five leadership behaviours critical for the emergence of a service climate: 1) customer assistance, related to role modelling; 2) complaint handling, related to both role modelling and the next two behaviours; 3) backing up employees on decisions taken in the ‘moment of truth’; 4) protecting employees from disgruntled customers; and, 5) service recovery efforts where the leader steps in to restore bad service experience. The leadership actions conducive to the emergence of a service climate indicate two distinct practices rooted in the service climate: how customers are served to create positive experiences and how negative experiences are remedied. In addition, Bowen and Schneider (2013) reported that transformational and servant leadership is conducive to the emergence of a service climate. See table 27 for the theoretical framework. In the following sections, the attention turns to reviewing the literature in the group of supportive climates.

**Table 27. Theoretical Framework, Performance climates. Climate for service.**

Definition	<b>H<sub>44</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>45</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ... when it comes to serving our customers to create positive customer experiences; and to restore negative customer experiences.	(Bowen and Schneider, 2013; Heskett <i>et al.</i> , 1994; Hong <i>et al.</i> , 2013; Schneider, Ehrhart and Macey, 2013; Yagil, 2014)	(Bowen and Schneider, 2013; Heskett <i>et al.</i> , 1994; Hong <i>et al.</i> , 2013; Schneider, Ehrhart and Macey, 2013; Yagil, 2014)

Source: Literature review.

### 7.3 The group of supportive climates

The supportive climates pertain to practices like improving relationships, team satisfaction and wellbeing, building trust and commitment, and evaluating collaborative performance, which is found to have a positive influence on collaborative working (Patel, Pettitt and Wilson, 2012). The literature review revealed that climates supporting organisational functioning span across many differences in conceptualisation, yet four clusters emerged. The group of supportive climates encompass the climate for collaboration; the climate for productive discussion; the climate for fairness and justice; and, the climate for empowerment, which are expanded upon in the following sections.

#### 7.3.1 Supportive climates: Climate for collaboration

Firstly, a group emerged encompassing climates for caring, belonging, warmth, harmony and well-being (Cogliser and Schriesheim, 2000; Gardner *et al.*, 2005; Jung *et al.*, 2009; Michie and West, 2004; Schneider, Ehrhart and Macey, 2013), which link to climates for trust, participative safety, admitting mistakes and respect (Andriopoulos, 2001; Cogliser and Schriesheim, 2000; Dragoni, 2005; Hogg, Van Knippenberg and Rast, 2012a; Jung *et al.*, 2009; Michie and West, 2004; Patel, Pettitt and Wilson, 2012; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012). These climates concern some of the same facets as the climates for tolerance, inclusion and valuing diversity (Berson *et al.*, 2006; Cogliser and Schriesheim, 2000; Mannix and Neale, 2005; Schneider, Ehrhart and Macey, 2013).

Secondly, in the same cluster, a group of climates which pertain to collaboration (Bell and Kozlowski, 2002; Cogliser and Schriesheim, 2000; Jung *et al.*, 2009; Michie and West, 2004; Patel, Pettitt and Wilson, 2012); back-up behaviour (Salas, Sims and Burke, 2005) and leader-member exchange (Avolio *et al.*, 2004a; Cogliser and Schriesheim, 2000; Dragoni, 2005; Piccolo and Colquitt, 2006; Uhl-Bien *et al.*, 2014; Wang *et al.*, 2005) were analysed. Together, this group of climates are focused on collaboration behaviour within a team and across organisational boundaries. The literature analysis indicated that the second group of climates could be regarded as behavioural manifestations resulting in good collaboration. The behavioural manifestations are driven by the antecedents in the first group; caring, belonging, warmth, harmony, trust, respect, inclusion, valuing diversity and good relations. The two groups come together in the climate for collaboration as part of the supportive climates group. In the following, three antecedents to a strong climate for collaboration are discussed before leadership is addressed and the theoretical framework is summarised. It concerns trust, openness and common ground, and relationship quality.

### 7.3.1.1 Trust

Several Authors highlight trust and participative safety as key components in developing performance (Avolio and Gardner, 2005; Ehrhart, 2004; Gardner *et al.*, 2005), especially if the desired outcome is exploration, innovation or creativity (Andriopoulos, 2001; Chatman and Cha, 2003; Raisch and Birkinshaw, 2008), or if it is a high-risk environment (Antonakis, Avolio and Sivasubramaniam, 2003; Brown and Treviño, 2006; Dragoni, 2005; Patel, Pettitt and Wilson, 2012). Mutual trust was introduced by Salas, Sims and Burke (2005) in their research on effective teams as an antecedent to the members' willingness to suspend protective and checking behaviour, and in line with other authors emphasised as a key antecedent to participative safety (Avolio and Gardner, 2005; Ehrhart, 2004; Gardner *et al.*, 2005). The fundamental influence of trust and psychological safety found by the abovementioned authors corresponds well with research on authentic leadership (Avolio and Gardner, 2005) and transformational leadership (Wang *et al.*, 2011). Leadership is consistently found to be a significant predictor of collective follower trust, and participative safety (Gardner *et al.*, 2005; Podsakoff *et al.*, 1990; Schneider, Ehrhart and Macey, 2013), and is related to the experienced authenticity from the leader (Avolio and Gardner, 2005; Avolio *et al.*, 2004a; Gardner *et al.*, 2005; Wang *et al.*, 2005). Research into Authentic leadership emphasises several leader behaviours which develop trust, engagement and workplace well-being among followers. That is, transparent decision making; self-disclosure by sharing values, beliefs, thoughts and feelings in an open manner; and debriefing and reflecting together. Also, balancing follower capabilities against challenges to ensure person-role fit; helping followers discover for themselves their true talents and facilitate the use hereof (Avolio and Gardner, 2005; Gardner *et al.*, 2005). In this vein, trust and authenticity can be considered 'root constructs' setting the tone for how all leadership behaviours from a leader is perceived (Gardner *et al.*, 2005). In turn, it indicates that trust is a base construct on the outcome side influencing the followers' enactment of any job performance behaviours (Avolio *et al.*, 2004a). In the following sections, trust as this kind of 'root construct' reemerges in the discussions of tolerance, collaboration and leadership.

### 7.3.1.2 Openness and common ground

The literature extends solid support to the importance of openness to divergent thinking and tolerance of diversity in conjunction with the necessary common ground to effective teamwork (Berson *et al.*, 2006; Mannix and Neale, 2005; Patel, Pettitt and Wilson, 2012).



Mannix and Neale (2005) reported findings that to benefit from minority-opinions in teams, a leader should actively solicit and support the presentation of such minority-views and promote the openness to differing views in the team. Other authors concur and stress the importance of openness as imperative to innovation (Martins and Terblanche, 2003; Michie and West, 2004) and inter-group collaboration (Hogg, Van Knippenberg and Rast, 2012a). Such openness and tolerance relate to mutual trust and participative safety. Salas, Sims and Burke's (2005) stressed the importance hereof in conjunction with the development of shared mental models in their meta-analysis. They outlined that shared mental models concern shared understandings of the tasks; expected team behaviour; and, agreed ways of working (Salas, Sims and Burke, 2005). They found that team members may head toward different goals without it, resulting in an inability to provide effective feedback, anticipate each other's needs or actions, communicate effectively, extend backup behaviour and perform together (Salas, Sims and Burke, 2005). These findings align well with the 'common ground' emphasised by Patel, Pettitt and Wilson (2012) as important for collaborative working. Patel, Pettitt and Wilson (2012) included a broader foundation for collaboration in their discussion of 'common ground.' They found two types of awareness related to their factor of shared awareness/knowledge: 'collaborative' and 'task and activity' awareness (Patel, Pettitt and Wilson, 2012). High collaborative awareness pertains to a shared understanding of how to collaborate, while task awareness concerns knowing how resources are allocated, the whereabouts and actions of colleagues, and the status of task/project progress (Patel, Pettitt and Wilson, 2012). In the same vein, they identified common ground as conducive to collaboration. They defined it as the extent to which team members have a shared language, culture, values, understanding of working practices and norms (Patel, Pettitt and Wilson, 2012). In addition, Salas, Sims and Burke (2005) and Mannix and Neale (2005) stressed the importance of not letting shared mental models result in decreased adaptability because of a lack of healthy task conflict. This indicates attenuating effects of harmony upon a weak climate for productive discussions. Together, it suggests that a leader must stimulate the emergence of a climate with common ground and openness to divergent thinking in a balance supporting the organisational intentions.

### *7.3.1.3 Relationship quality matters to the climate*

A third element in the climate for collaboration is social support. The social support level concerns the opportunities to gather advice and assistance from co-workers, and the leader (Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008).

Social support has a significant influence on well-being at work and is related to organisational commitment; turnover intentions; handling ambiguity; handling conflicts; the feeling of belonging; work motivation; team satisfaction; team effectiveness, and team productivity (Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008). Extending the understanding of social support, Uhl-Bien et al. (2014) stress the positive effects of high-quality Leader-Member Exchange relationships (LMX) on followership in their extensive review of the followership literature. They report that high-quality LMX is conducive to the co-production of leadership outcomes due to the follower's more active contribution in finding the what and how of goal attainment (Uhl-Bien *et al.*, 2014). Cogliser and Schriesheim (2000), who explored work unit context and LMX, found that LMX quality was negatively related to role stress and lack of harmony; while positively related to coping with job challenge and autonomy, workgroup cooperation, friendliness and warmth. Dragoni (2005) concurs and reported a heightened sense of obligation to contribute and meet expectations flowing from high-quality LMX, and that this prompts team members to influence peers in support of meeting the expectations. Moreover, Piccolo and Colquitt (2006) reported that team members with high-quality LMX relationships are more committed and trust their leaders more, resulting in higher responsiveness to leadership. Interestingly, the emergence of the Team Member Exchange relationship construct (TMX) by Seers in 1989 highlights the base influence of relationship quality among team members. The TMX and LMX dynamics resemble each other concerning the reciprocal expectations and exchange of both tangible and more socially bound currencies (Banks *et al.*, 2014; Seers, 1989), and both have confirmed influences on organisational commitment and job performance (Banks *et al.*, 2014). In this manner, trust, tolerance and relationship quality come together, fuelling collaboration and coping capacity to handle job-related demands (Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008). So, when Von Krogh, Nonaka and Rechsteiner (2012) described a 'pledged group' as a team who listen actively; take turns in speaking; explain ideas, concepts and actions; maintain curiosity; seek to understand rationales behind arguments; and contrast ideas, arguments and viewpoints they seem to summarise the effects of a strong climate for collaboration neatly.

#### *7.3.1.4 Leadership influences the climate for collaboration*

Wang et al. (2005) confirmed the impact of the quality of leader-member exchange as a necessary but not sufficient part of effective leadership, as do other authors (Avolio *et al.*, 2004a; Cogliser and Schriesheim, 2000; Dragoni, 2005; Uhl-Bien *et al.*, 2014).

These findings contribute to the clarity that when leading, there is both a *what*, i.e. a leader behaviour range exercised to solicit specific behaviour from followers, and a *how*, i.e. a leader style range that acts as the key drivers of the antecedents to collaboration. For example, trust, tolerance and, in turn, collaboration are positively influenced by how leadership is enacted when it comes to frequency and consistency (Avolio *et al.*, 2004a; Cogliser and Schriesheim, 2000; Dragoni, 2005; Uhl-Bien *et al.*, 2014); acting as you say you will and direct communication (Gardner *et al.*, 2005); sharing personal views and involving (Avolio and Gardner, 2005); and, ethical conduct (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005). However, the emergence of a strong climate also depends on certain ‘whats’ in the leadership range, be that developing the ‘task and activity’ awareness (Patel, Pettitt and Wilson, 2012); soliciting and supporting minority-views (Mannix and Neale, 2005); or establishing standard ways of working (Salas, Sims and Burke, 2005). The findings discussed in this section indicate that climate for collaboration will provide a buffering capacity that exercises positive intensifying effects on other climates, for example, the climate for productive discussion, which we will turn to next. In summary, the framework for climate for collaboration is displayed in table 28.

**Table 28. Theoretical Framework, Supportive climates. Climate for collaboration.**

<b>Definition</b>	<b>H<sub>46</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>47</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ... when it comes to collaborating well, acting from a common ground; trusting each other; feeling safe in the group; being open to other views; accepting each other; building good relations; and, helping and backing each other up.	(Andriopoulos, 2001; Antonakis, Avolio and Sivasubramaniam, 2003; Avolio and Gardner, 2005; Avolio <i>et al.</i> , 2004a; Banks <i>et al.</i> , 2014; Bell and Kozlowski, 2002; Berson <i>et al.</i> , 2006; Brown and Treviño, 2006; Chatman and Cha, 2003; Cogliser and Schriesheim, 2000; Dragoni, 2005; Ehrhart, 2004; Gardner <i>et al.</i> , 2005; Hogg, Van Knippenberg and Rast, 2012a; Howard-Grenville, 2005; Javidan <i>et al.</i> , 2006a; Mannix and Neale, 2005; Martins and Terblanche, 2003; Michie and West, 2004; Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Piccolo and Colquitt, 2006; Raisch and Birkinshaw, 2008; Salas, Sims and Burke, 2005; Seers, 1989; Shalley and Gilson, 2004; Uhl-Bien <i>et al.</i> , 2014; von Krogh, Nonaka and Rechsteiner, 2012; Wang <i>et al.</i> , 2005)	(Avolio and Gardner, 2005; Avolio <i>et al.</i> , 2004a; Banks <i>et al.</i> , 2014; Brown and Treviño, 2006; Cogliser and Schriesheim, 2000; Dragoni, 2005; Gardner <i>et al.</i> , 2005; Howard-Grenville, 2005; Mannix and Neale, 2005; Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Piccolo and Colquitt, 2006; Podsakoff <i>et al.</i> , 1990; Salas, Sims and Burke, 2005; Schneider, Ehrhart and Macey, 2013; Seers, 1989; Uhl-Bien <i>et al.</i> , 2014; von Krogh, Nonaka and Rechsteiner, 2012; Wang <i>et al.</i> , 2011; Wang <i>et al.</i> , 2005)

Source: Literature review.

### 7.3.2 Supportive climates: Climate for productive discussion

The second cluster in the group of supportive climates concerns the climate for productive discussions. It revolves around voice and willingness to disagree as a means of supporting good and insightful decisions, learning and creativity (Andriopoulos, 2001; Antonakis, Avolio and Sivasubramaniam, 2003; Berson *et al.*, 2006; Dionne *et al.*, 2004; Elkins and Keller, 2003; Mannix and Neale, 2005; Marta, Leritz and Mumford, 2005; Martins and Terblanche, 2003; Patel, Pettitt and Wilson, 2012; Pearce, 2004; Shalley and Gilson, 2004; Uhl-Bien *et al.*, 2014). It led to the decision that a climate pertaining to productive discussions and constructive conflicts exists as part of the supportive climates group.

Several sources in the reviewed literature support the importance of a teams' ability to engage in productive discussions. For example, Andriopoulos (2001) reported that divergent thinking is a vital component in promoting creativity. Marta, Leritz and Mumford (2005) found that differences in the alignment of problem-solving approach influenced the originality and quality of plans. Both facilitating divergent thinking, and conversely, aligning on the problem-solving approach in a team relies on the ability to disagree and commit, i.e. engage in productive discussion. In agreement, Martins and Terblanche (2003) found that constructive challenges inside diverse teams or with external others promote innovation and that the ability to constructively handle such conflict is critical. In their review of the effects of diversity, Mannix and Neale (2005) stressed the importance of healthy task conflict to release the creative potential that diversity of perspectives holds for better group performance. Mannix and Neale (2005) reported findings of diversity without enough common ground to attenuate the emergence of cohesion and integration in work teams resulting in poor performance. These findings align well with the previous discussion on the climate for collaboration. Juxtaposing these effects of diversity to the importance of building common ground indicates that if common ground is to be crafted in diverse teams, it is necessary to have a strong climate for productive discussions as a pathway (Dionne *et al.*, 2004; Mannix and Neale, 2005; Martins and Terblanche, 2003). In support, Dionne *et al.* (2004) found that the creation of a climate where questioning assumptions, non-traditional thinking and seeking differing perspectives, i.e. the leadership practice of intellectual stimulation, positively influence the quality of collaboration and level of effort in the team. Moreover, Elkins and Keller (2003) found that intellectual stimulation was associated with performance outcomes; in their case, project success for Research and Development teams, thus confirming that the internal functioning in the team has an impact on team results.

Intellectual stimulation pertains to a leader “..*challenging followers to think creatively and find solutions to difficult problems*” (Antonakis, Avolio and Sivasubramaniam, 2003, p. 265), i.e. that the leader facilitates productive discussions. Berson et al. (2006) concurred that constructive conflict is important to the emergence of creativity and exploration, and so did and Shalley and Gilson (2004). Together they found that leaders who offer differing perspectives; challenge existing ways of working; facilitate diversity in perspectives; engage high-ability members in discussion; create an atmosphere where it is safe to come up with ideas; and tolerate mistakes and utilize these for future learning stimulate the emergence of creativity (Berson *et al.*, 2006; Shalley and Gilson, 2004). Further indicating the importance of constructive conflicts is the identification of decision making as a key component influencing the quality of collaboration and performance in teams (Patel, Pettitt and Wilson, 2012; Pearce, 2004). Effective decision making in teams entails productive discussions (Patel, Pettitt and Wilson, 2012); the necessary quality of the leader-follower exchange (Antonakis, Avolio and Sivasubramaniam, 2003; Wang *et al.*, 2005); a certain level of followers’ participation and decision making autonomy (Avolio *et al.*, 2004a; Morgeson and Humphrey, 2008); and, practices for followers’ involvement in negotiating demands, voicing perspectives and advising to qualify decisions (Uhl-Bien *et al.*, 2014). Together, see table 29 for the definition of the climate for productive discussions and its effects. In continuation, the climate for fairness and justice is up for investigation, followed by the climate for empowerment as the last in the group of the supportive climates.

**Table 29. Theoretical Framework, Supportive climates. Climate for productive discussion.**

<b>Definition</b>	<b>H<sub>48</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>49</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ...when it comes to engaging in productive discussions and constructive conflict to promote divergent thinking in problem-solving; qualify decision making; or, to align and create common ground.	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Dionne <i>et al.</i> , 2004; Elkins and Keller, 2003; Mannix and Neale, 2005; Marta, Leritz and Mumford, 2005; Martins and Terblanche, 2003; Patel, Pettitt and Wilson, 2012; Pearce, 2004; Shalley and Gilson, 2004; Uhl-Bien <i>et al.</i> , 2014)	(Antonakis, Avolio and Sivasubramaniam, 2003; Avolio <i>et al.</i> , 2004a; Dionne <i>et al.</i> , 2004; Elkins and Keller, 2003; Marta, Leritz and Mumford, 2005; Martins and Terblanche, 2003; Morgeson and Humphrey, 2008; Uhl-Bien <i>et al.</i> , 2014)

Source: Literature review.

### 7.3.3 Supportive climates: Climate for fairness and justice

The third cluster concerns the fairness and justice climate (Ehrhart, 2004; Gardner *et al.*, 2005; Schneider, Ehrhart and Macey, 2013; Shalley and Gilson, 2004), which influence both collaboration and the willingness to participate in productive discussions. It pertains to collective perceptions and experiences of fairness when it comes to procedural, interactional, and distributive justice (Rupp and Thornton, 2014). Procedural justice pertains to the rules, regulations, policies and procedures and their application (Ehrhart, 2004; Podsakoff *et al.*, 2006; Rupp and Thornton, 2014; Schneider, Ehrhart and Macey, 2013; von Krogh, Nonaka and Rechsteiner, 2012). The interactional justice pertains to the interpersonal treatment (Podsakoff *et al.*, 2006; Rupp and Thornton, 2014), and distributive justice concerns the perceived fairness of distribution of resources and rewards (Podsakoff *et al.*, 2006; Rupp and Thornton, 2014).

Emphasising the relevance to leadership context, Schneider, Ehrhart and Macey (2013) summarised from extant literature that justice climate is related to turnover; customer satisfaction; team performance; absenteeism; and, to unit-level and individual OCB. Also, that leadership influences the justice climate, and that it is attenuated or intensified by individually held values (Schneider, Ehrhart and Macey, 2013). Shalley and Gilson (2004) reported the importance of justice climate to participative safety and referred findings that being involved in decision making; giving input without being ridiculed or judged is positively linked to learning. That is, both procedural and interactional justice seem to help the emergence of participative safety. Rupp and Thornton (2014) agree that several elements influence the justice perception and reported studies showing relations between interactional justice and satisfaction with the leader; distributive justice and outcome satisfaction; and, procedural justice and OCB-O and rule compliance. Concentrating on procedural justice, Ehrhart (2004) tested a model asserting positive associations between leadership and the emergence of procedural justice climate, and in turn, the emergence of unit-level OCB. Ehrhart (2004) focused on leader behaviours directed towards the unit, i.e. behaviours and principles related to certain decisions, procedures, or policies applied consistently across members. This perspective manifests the strengthening effects leadership can have on the climate through the implementation of measures from the systemic stratum. In turn, it indicates that a leader can mitigate weak procedures through the principled consistent agency. Ehrhart (2004) was concerned with procedural justice, specifically, the perceptions related to rewarding. Ehrhart (2004) investigated how consistent and bias-free procedures were experienced; to which extent followers experienced a chance to voice their opinions about the fairness of procedures; and, whether the procedures met subjective expectations to ethical and moral standards.

Ehrhart (2004) found support for procedural justice climate as a mediator between leadership and unit-level OCB. Rupp and Thornton (2014), who reviewed justice climate literature in the *Oxford Handbook of Organizational Climate and Culture*, concurred and reported extant findings that procedural justice climate predicts OCB-O; and, is related to effective conflict resolution; team performance; absenteeism; commitment; and, helping behaviours.

For the second element, interactional justice, Rupp and Thornton (2014) summarised positive relations to affective commitment; satisfaction with supervisor; discretionary service behaviour, and, intention to remain. Related to interactional justice Podsakoff et al. (2006) found that when leaders reward or sanction contingently rather than non-contingently, the followers perceive this to be fairer. This relates back to the importance of expectation-based strength, as, without clear expectations, any reward or sanction could be perceived non-contingent.

The third of the justice elements, distributive justice, relates to the fairness perception of criteria applied for the allocation of rewards, resources or sanctions. Hence, if employees experience logical and objective reasoning for the allocation, such as tangible job performance measurements or clearly expressed behavioural expectations, the allocation will be considered more just (Podsakoff *et al.*, 2006). Ehrhart's (2004) study warranted the importance of the process fairness; however, other studies suggest that if the distribution of rewards is perceived unfairly skewed, it attenuates the experienced fairness of the allocation process itself (Rupp and Thornton, 2014). A similar logic applies for sanctionary interventions, which will be judged by followers both on the fairness of the sanction decision procedure; the correspondence between violation and punishment; and the way the leader interacts during the process (Podsakoff *et al.*, 2006; Rupp and Thornton, 2014). The above findings indicate that in the leadership context all three types of justice must be considered together, but also as separate elements. Also, that while the perception of justice relates to the fairness of rules, criteria and procedures themselves, it also relates to the enactment through leadership. In the same vein, Gardner et al. (2005), stress credibility as a core attribute in authentic leadership as "*to gain credibility, one's actions must match one's words*" (p. 351), and the discussion suggest that this could be expanded to 'and match the expectations expressed by the organisation through its priorities, rules, regulations, procedures, policies, code of conduct.' The trilogy of justice climate element suggests that the theoretical framework for climate for justice and fairness and its effects can be summarised as in table 30 on the following page.

**Table 30. Theoretical Framework, Supportive climates. Climate for fairness and justice.**

Definition	<b>H<sub>50</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>51</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ...when it comes to the fairness of rules, regulations, policies and procedures and their application; the fairness of the judgements and decisions made by leaders; and, the fairness in the distribution of resources, rewards and sanctions.	(Ehrhart, 2004; Podsakoff <i>et al.</i> , 2006; Rupp and Thornton, 2014; Schneider, Ehrhart and Macey, 2013; Shalley and Gilson, 2004)	(Ehrhart, 2004; Gardner <i>et al.</i> , 2005; Podsakoff <i>et al.</i> , 2006; Rupp and Thornton, 2014; Schneider, Ehrhart and Macey, 2013; Shalley and Gilson, 2004)

Source: Literature review.

### 7.3.4 Supportive climates: Climate for empowerment

Finally, the fourth supportive climate cluster identified pertains to involvement, participation and following (Andriopoulos, 2001; Berson *et al.*, 2006; Patel, Pettitt and Wilson, 2012; Salas, Sims and Burke, 2005; Uhl-Bien *et al.*, 2014; Wang *et al.*, 2011). Related to following are the climates pertaining to empowerment, autonomy and shared leadership (Andriopoulos, 2001; Avolio *et al.*, 2004b; Pearce, 2004; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012; Wang *et al.*, 2011). The latter concerns the extent to which employees act out their given responsibilities in full when it encompasses influencing and guiding peers. Together, the climates for following and empowerment were termed the climate for empowerment in this study.

In 2014, Uhl-Bien *et al.* developed a theory of followership through a systematic review and reported a widespread agreement that there is no leadership without followership. Followership comprises a range of reciprocal behavioural responses to the influence exerted by the leading actor in the relation, e.g. negotiating demands, constructive or dysfunctional resistance, voicing other perspectives, advising to qualify decisions, correcting, or accommodating (Uhl-Bien *et al.*, 2014). Juxta-posing Uhl-Bien *et al.*'s (2014) work on followership to research on work performance (Purvanova, Bono and Dziewieczynski, 2006; Viswesvaran and Ones, 2000) and shared leadership (Pearce, 2004) support that when interested in understanding the supportive climates, empowerment becomes imperative. The literature analysis revealed three related elements in this cluster concerning followership and empowered self-directed team member action.



Firstly, the followers' involvement and participation in co-producing leadership with the leader (Uhl-Bien *et al.*, 2014). Secondly, their citizenship behaviour as part of a team (Purvanova, Bono and Dzieweczynski, 2006; Viswesvaran and Ones, 2000). Thirdly, extending the citizenship behaviour influencing peers and the leader when competence, situation or social setting warrants that a team member leads (Pearce, 2004).

Uhl-Bien *et al.* (2014) delineated followership to the reciprocal participation between an actor leading and one or more actors following, considering the 'acting out' after being influenced as an outcome of leadership. Hence, Uhl-Bien *et al.* (2014) considered OCB enacted by team members as an outcome of leadership separate from followership in line with this thesis' literature analysis. However, a gap in followership as defined by Uhl-Bien *et al.* (2014) emerged concerning the empowered self-directed initiatives when a team member temporarily leads peers. Several authors concur that all three elements; following, citizenship and empowerment, are key drivers for performance (Andriopoulos, 2001; Berson *et al.*, 2006; Patel, Pettitt and Wilson, 2012; Salas, Sims and Burke, 2005; Wang *et al.*, 2011). In this thesis' conceptualisation, involvement and participation are partly covered by the climate for collaboration and the climate for productive discussion. Although excluding it from their definition of followership, Uhl-Bien *et al.* (2014) also discussed follower efforts directed towards influencing their work environment encompassing proactive behaviours like taking charge behaviour; feedback-seeking; influencing work structures; and, personal initiative-taking. Such proactive behaviours are important to the leadership context due to their effects on the desired outcomes of leadership, herein conceptualised as the climate for empowerment.

Empowerment specifically pertains to how much self-directed initiative a team member displays (Avolio *et al.*, 2004b). Avolio *et al.* (2004b) studied how transformational leadership influences organisational commitment and how increased psychological empowerment<sup>xiii</sup>, due to a higher experienced sense of meaning, results in employees who are more likely to reciprocate with higher commitment. In turn, the increased organisational commitment results in extra-role efforts, more initiative, higher levels of concentration, energy to perform and resiliency (Avolio *et al.*, 2004b; Spreitzer, de Janasz and Quinn, 1999). A cornerstone highlighted by Spreitzer, de Janasz and Quinn (1999) is that increased empowerment leads to an active orientation to influencing work conditions, peers and one's leader. Such an active orientation to influencing each other was reported by von Krogh, Nonaka and Rechsteiner's (2012) as a key component in knowledge creation, and it corresponds with the team performance literature where peer-to-peer influencing is found to be vital for effective teams (Salas, Sims and Burke, 2005).

In 2004, the understanding of empowerment was extended with the introduction of 'shared leadership' (Pearce, 2004). Shared leadership is an ongoing, simultaneous, mutual influence process where team members and the vertical leader assume leadership behaviour towards other constituents (Pearce, 2004). Pearce (2004) argued that shared leadership equals fully developed empowerment and pointed to a need for sufficient requisite task skills and abilities among the team members for shared leadership to yield better results than vertical leadership. Pearce (2004) suggested enrolling key constituents in clarifying task demands, resource allocation, role specifications, performance and interaction expectations while leaving the task of defining the team's purpose and articulating a vision in the hands of the vertical leader. Pearce's (2004) suggestions align well with Avolio et al. (2004b), who identified key leader behaviours driving empowerment encompassing: encouraging critical thinking and seeking new ways; participation in decision-making; considering and appreciating individual needs; and, developing potential and talent<sup>xiv</sup>. Moreover, Pearce (2004) suggests that the leader supports the emergence by stepping in with judicious interventions when conflicts or withdrawal behaviour occurs; and, trains, encourages and expresses clear expectations to shared leadership behaviour. Pearce's attention to the judicious interventions indicates the potential attenuating effects of a weak justice climate. Moreover, the proposed approach to facilitating the emergence of an empowered climate relates to the dynamics of peer role modelling and vicarious learning, often highlighted as vital in the emergence of strong climates in climate research (Schneider, Ehrhart and Macey, 2013). In summary, see table 31.

**Table 31. Theoretical Framework, Supportive climates. Climate for empowerment.**

<b>Definition</b>	<b>H<sub>52</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>53</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ...when it comes to participating constructively as a follower when being led; taking empowered action; and, acting out given responsibilities in full also when it includes influencing and guiding peers.	(Andriopoulos, 2001; Avolio <i>et al.</i> , 2004b; Berson <i>et al.</i> , 2006; Patel, Pettitt and Wilson, 2012; Pearce, 2004; Purvanova, Bono and Dziewieczynski, 2006; Salas, Sims and Burke, 2005; Spreitzer, de Janasz and Quinn, 1999; Schneider, Ehrhart and Macey, 2013; Uhl-Bien <i>et al.</i> , 2014; Viswesvaran and Ones, 2000; von Krogh, Nonaka and Rechsteiner, 2012; Wang <i>et al.</i> , 2011)	(Andriopoulos, 2001; Avolio <i>et al.</i> , 2004b; Berson <i>et al.</i> , 2006; Patel, Pettitt and Wilson, 2012; Pearce, 2004; Uhl-Bien <i>et al.</i> , 2014; Wang <i>et al.</i> , 2011)

Source: Literature review.

## 7.4 The group of protective climates

The importance of protective climates was highlighted by Patel, Pettitt and Wilson (2012) in their investigation of collaborative working and pertain to improving levels of employee safety, addressing health issues, emphasising security, and increasing patient safety. From the literature review, three clusters of climates driven by protective intentions emerged: the climate for safety; the climate for ethical conduct; and, the climate for sustainability, all further explored in the following sections.

### 7.4.1 Protective climates: Safety climate

A cluster of safety climates emerged as relevant to leadership (Michie and West, 2004; Schneider, Ehrhart and Macey, 2013). It represents a clear example of a climate flowing from an organisational protective intention (Zohar, 2014). The relevance of safety climates is further warranted by the attention to dangerous or high-risk environments (Campbell, 2012; Hannah *et al.*, 2009), indicating the necessity to balance the protection of organisational members with acceptable risk in the goal attainment efforts.

Safety climate is a stable predictor of safety behaviour, compliance and outcomes across geographies and industries (Michie and West, 2004; Nahrgang, Morgeson and Hofmann, 2011; Zohar, 2014). Safety is an integrated part of the work design literature addressing a dual purpose. That is, jobs should be designed to protect the 'least capable worker' and protect the system's performance by avoiding accidents and errors (Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008). The job demands emphasising the need for a strong safety climate are exposure to hazards, dangerous machinery, fluids, materials or high-risk situations (Campbell, Hannah and Matthews, 2010; Hannah *et al.*, 2009; Nahrgang, Morgeson and Hofmann, 2011; Zohar, 2014). In the literature, there is consensus that the climate for safety is focused on physical safety. It does not concern other stressors like emotional conflict, moral intensity, role overload or procedural hassles that have more long-term health impairing effects like stress and burnout (Morgeson and Humphrey, 2008; Nahrgang, Morgeson and Hofmann, 2011; Schaufeli, 2015). Hence, the safety climate relates to the existence of threats, the avoidance of threat manifestation and the responses when incidents occur (Nahrgang, Morgeson and Hofmann, 2011; Zohar, 2008; Zohar, 2014). Zohar (2008), who reviewed the safety climate literature, emphasised that safety climate comprises two supplementing types: compliance-, and commitment-based safety climate. Compliance-based safety climate concerns adherence to established and communicated safety procedures, use of protective equipment, and using safety control systems.

Commitment-based safety climate pertains to discretionary behaviour contributing to safe working (Zohar, 2008). Zohar (2008) report findings that a commitment-based safety climate is a stronger predictor of safety outcomes<sup>xv</sup>, and that the less predictive the environment is, the more critical a strong commitment-based safety climate becomes. Zohar (2014) summarised that interventions such as identification of safety-critical behaviours; audits and observations of safety behaviour; and, feedback processes promote a strong safety climate. Also, Zohar (2014) reported from studies he did with colleagues that the inclusion of safety messages in daily exchanges between the leader and members co-varied with the observed frequency of safety behaviour. Moreover, that measurement of the safety climate before and after a period of consistent and frequent reinforcement of attention from the leader revealed a strengthened climate and a reduction in injuries (Zohar, 2014). The combination of compliance and commitment identified in the safety literature corresponds well with the climate strength concept and underlines that a leader should work with all four strength dimensions.

From another vantage point, Baran and Scott (2010) developed a grounded theory from 100 near-miss fire-fighting incidents in their study *Leadership and Sensemaking Within Dangerous Contexts*. They built on complexity leadership (Marion and Uhl-Bien, 2001; Uhl-Bien, Marion and McKelvey, 2007) and found that collective sensemaking<sup>xvi</sup> has a positive effect on safety behaviour emphasising the climate influence. Baran and Scott (2010) advocated leadership as a key driver in collective sensemaking about assessing and accepting threats; preventing risks; and, responding to incidents. They focused on an environment where a strong safety climate is imperative because threats in the determinant stratum cannot be removed, only mitigated (Baran and Scott, 2010). The year before, Hannah et al. (2009) focused on developing a typology for extreme context, which is helpful to nuance the views on safety climate. They introduced four types: trauma organisations, such as emergency medical teams, who repeatedly experience operating under risk. Secondly, critical action organisations, for example, fire response teams or military combat units, operating in environments where taking calculated risk is necessary. Thirdly, high-reliability organisations, such as nuclear power plants or disease control organisations, where preventive safety measures are imperative. Fourth, the typology concern naïve organisations operating in low-risk environments, often resulting in a low safety focus. Hannah et al.'s (2009) investigation of extreme contexts highlighted differences in the strength of the safety climate needed depending on the context and the organisation's purpose. There needs to be a certain risk acceptance for some organisations, while it will be 'safety first' for other organisations. The climate for safety and related hypotheses are summarised in table 32 on the following page.

**Table 32. Theoretical Framework, Protective climates. Climate for safety.**

Definition	H <sub>54</sub> : Has causal powers to help or hinder leadership and/or work performance	H <sub>55</sub> : The climate can be strengthened through leadership interventions
See climate definition ...when it comes to physical safety; the assessment of work hazards and threats; the risk avoidance; the risk acceptance; the preventive protection; and, the reactive safety responses.	(Baran and Scott, 2010; Campbell, Hannah and Matthews, 2010; Hannah <i>et al.</i> , 2009; Michie and West, 2004; Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008; Nahrgang, Morgeson and Hofmann, 2011; Zohar, 2008; Zohar, 2014)	(Baran and Scott, 2010; Campbell, Hannah and Matthews, 2010; Morgeson, Campion and Bruning, 2012; Morgeson and Humphrey, 2008; Zohar, 2014)

Source: Literature review.

#### 7.4.2 Protective climates: Ethical climate

A second cluster addressing the intention of protecting an organisation emerged. It concerns protection from unethical behaviour and enabling members to navigate in moral intensive environments (Brown and Treviño, 2006; Dinh *et al.*, 2014; Gardner *et al.*, 2005; Schneider, Ehrhart and Macey, 2013). This section develops the theoretical framework for the ethical climate as part of the leadership context.

There is increasing attention to the ethical, moral and value-based content of leadership (Dinh *et al.*, 2014). In this vein, the ethical climate relates to the joint perceptions of the expected standards or norms for moral or ethical reasoning guiding behaviour and decision making (Cullen, Parboteeah and Victor, 2003; Mayer, 2014; Victor and Cullen, 1988). Mayer (2014) summarised 136 studies confirming positive effects of a strong ethical climate on ethical behaviour; work satisfaction; organisational commitment; rule compliance; organisational health; ethical decision making; relationship quality; OCB; well-being; trust; willingness to whistleblow; risk-taking; turnover intentions; misconduct; unethical behaviour; role conflict; role ambiguity; role stress; bullying; lying; stealing; falsifying; and misreporting. Brown and Treviño (2006) reported from extant research that there two dimensions of moral intensity which warrant the importance of a strong ethical climate. The potential harm the decision can cause and the ethical code prevailing, i.e. the social consensus dynamics driving adherence to norms (Brown and Treviño, 2006). In continuation, Brown, Treviño and Harrison (2005) posited that the importance of ethical code increase in environments with more ethical dilemmas, in boundary-spanning functions, in high ambiguity and in loosely structured contexts.

Highlighting that moral judgements are at the centre of ethics, Victor and Cullen (1988) suggested a typology of ethical climates including three criteria guiding moral judgements; egoistic, benevolence, and principle (Cullen, Parboteeah and Victor, 2003; Victor and Cullen, 1988). For the understanding of leadership context, the criteria guiding moral judgements seem relevant as these can shape the climate through the leader's role modelling (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005). The first is *egoism* as a foundation for moral judgement, which concerns maximation of self-interest and satisfying own needs, and the leader should be attentive to own and others' egoism involved in judgements (Cullen, Parboteeah and Victor, 2003; Victor and Cullen, 1988). When benevolence guides the moral judgement process, the main criteria is a concern for others, focus on the greater good and the maximisation of joint needs (Cullen, Parboteeah and Victor, 2003; Victor and Cullen, 1988). Lastly, the ethical judgement criterion of 'principle' concerns the application of expressed norms, rules, standards and codes in the unit as criteria in moral judgements (Cullen, Parboteeah and Victor, 2003; Victor and Cullen, 1988). These criteria are helpful in arriving at the moral judgement (Cullen, Parboteeah and Victor, 2003), but can also be considered important elements in the collective sense-making (Baran and Scott, 2010; Maitlis, 2005) shaping the climate.

Authentic and ethical leadership share that a leader should lead from an inner 'value compass' comprising values and moral standards. Moreover, that the value compass needs to be congruent with the company 'code' (Brown and Treviño, 2006; Gardner *et al.*, 2005). In Servant Leadership, which is also value-based, the focus is more on congruence with the leader's own inner beliefs rather than congruence to a guiding company 'ethical code' (Ehrhart, 2004; van Dierendonck, 2011). While the ethical dimension is also implicitly included in transformational and charismatic leadership theory, Brown, Treviño and Harrison (2005) argue that the leader behaviours included in these theories can be exercised in an ethical or unethical manner, implying that a 'code' acting as criteria exists. With a similar argumentation, Ehrhart (2004) suggested adding a 'moral compass' to transformational and LMX leadership. From a behavioural perspective, Brown and colleagues (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005) pulled together ethical leader practices comprising; care and consideration; establishing and communicating moral principles; holding people accountable for ethical conduct; acting in accordance with ethical standards; and, principled decision making. These behaviours rest upon the assumption that there are underlying norms for ethical conduct. The importance of such norms, the company's 'ethical code', is underlined by several authors (Brown, Treviño and Harrison, 2005; Mayer, 2014; Victor and Cullen, 1988).

The 'ethical code' comprises the formal policies for ethical conduct; how the reward and punishment systems support ethical or unethical conduct; informal ethical norms; and, the ethical leadership style (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005). In this manner, the 'ethical code' seems to be nested within the ethical climate as an important part of the expectation- and enactment-based strength.

Brown and colleagues (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005) stress role modelling to the emergence of a strong ethical climate. They suggest behaviours such as setting clear standards and expectations for ethical conduct; holding followers accountable; sustained communication of ethical messages; demonstrating consideration; treating people with dignity and respect; and, principled decision-making. Moreover, Brown et al. (2006) considered ethical role modelling a "side-by-side phenomenon" expanding role modelling to include the between member vicarious learning. In continuation, Brown, Treviño and Harrison (2005) highlight that role modelling also includes sense-making through dialogue about how behaviour and the 'code' align. Also, consistency in leader behaviour and congruence with the leader's inner beliefs, which are cornerstones in Authentic Leadership (Avolio *et al.*, 2004a), are emphasised by Brown and Treviño (2006) as vital to the emergence of a strong ethical climate. See table 33 for the definition and hypotheses for the climate for ethical conduct. In the following section, the last climate in the social stratum, the sustainability climate, is considered.

**Table 33. Theoretical Framework, Protective climates Climate for ethical conduct.**

Definition	H <sub>56</sub> : Has causal powers to help or hinder leadership and/or work performance	H <sub>57</sub> : The climate can be strengthened through leadership interventions
See climate definition ...when it comes to loyally enacting the company's ethical code; behaving ethically; promoting ethical conduct to peers; and making ethical decisions.	(Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005; Cullen, Parboteeah and Victor, 2003; Mayer, 2014; Victor and Cullen, 1988)	(Avolio <i>et al.</i> , 2004a; Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005; Gardner <i>et al.</i> , 2005; Mayer, 2014)

Source: Literature review.

### 7.4.3 Protective climates: Sustainability climate

A third interesting cluster; the protection of the environment and sustainability, was identified nowhere in the reviewed literature, which is puzzling given the rise in attention in business life exemplified by the UN Sustainability Development Goals ([www.un.org](http://www.un.org)). Given the importance to businesses, and hence the potential influence on leadership and its outcomes, sustainability climate was included in the group of protective climates to investigate if it holds causal effects that warrant a place in the leadership context.

Besides the attention in the ordinary and business press, *The Oxford Handbook of Organizational Climate and Culture* has a chapter on sustainability (Howard-Grenville, Bertels and Lahneman, 2014), warranting that the sustainability climate influences an organisation's members. Howard-Grenville, Bertels and Lahneman (2014) reported several forces driving increased attention to sustainability. These forces include pressure from consumers, shareholders, communities and environmental interest groups, which act in concert with regulatory and political pressure. They describe a trend towards sustainability as becoming a 'ticket to play' for companies, signifying the relevance for leaders to understand this part of leadership context (Howard-Grenville, Bertels and Lahneman, 2014). Howard-Grenville, Bertels and Lahneman (2014) outline sustainability as the practices concerning how to bring about good environmental and social impacts, stressing that it implies a holistic view of influencing stakeholders in the entire value chain. The overriding criteria concern the earth's well-being and pertain to how companies should act to support this purpose rather than reducing the thinking to 'does it pay off?' (Howard-Grenville, Bertels and Lahneman, 2014). Despite the potentially conflicting priorities, sustainability and efficiency targets can go hand in hand when companies reduce waste, energy consumption, increase recycling or implement other commitments to sustainability (Howard-Grenville, Bertels and Lahneman, 2014).

Drawing on the environmental management literature Howard-Grenville, Bertels and Lahneman (2014) contend that codification of environmental practices in conjunction with leadership is a key driver in achieving enactment from employees. They pulled together three mechanisms that leaders can apply to shape a sustainability climate: 1) framing sustainability, 2) establishing roles and role modelling, and, 3) implementing sustainability programs. Framing relates to the practices of communicating how sustainability goes hand in hand with current norms and values, such as pursuing efficiency. It also concerns using sustainability as an opportunity to innovate existing practices. Establishing roles relate to signalling the priority and ensuring resource allocation to drive attention by appointing a sustainability function.



The role modelling concerns the leaders influencing the organisational behaviour as for other climates. Implementing sustainability programs are proposed as a means of codifying expected health, safety and environmental behaviour supported by training and incentives (Howard-Grenville, Bertels and Lahneman, 2014). These practices do not differ from the practices promoting the emergence of other climates discussed earlier.

Moreover, they reported three illustrative mechanisms with which team members can promote a sustainability climate, that is, championing, experimenting and connecting to larger networks. Championing aligns with role modelling, as discussed earlier, while experimenting pertains to the effect of demonstrating the potential of new approaches (Howard-Grenville, Bertels and Lahneman, 2014). The last illustrative mechanism related to team efforts concerns the effect of legitimising the attention to sustainability through the interaction with external issue-oriented groups, such as NGOs (Howard-Grenville, Bertels and Lahneman, 2014). While Howard-Grenville, Bertels and Lahneman (2014) reported that the influence of internal factors in organisations' sustainability practices is under-researched, the review indicates a resemblance to both ethical and safety climate. Specifically, it aligns with the dynamics of acting from an ethical code with a range of related judgement calls discussed in the section on the ethical climate. Also, it aligns with the risk-preventive protection dynamics found in safety climate. Preliminarily, a theoretical framework for the sustainability climate and its effects is summarised in table 34.

**Table 34. Theoretical Framework, Protective climates. Climate for sustainability.**

Definition	<b>H<sub>58</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>59</sub>: The climate can be strengthened through leadership interventions</b>
See climate definition ... when it comes to loyally enacting the company's sustainability code; acting sustainably; promoting sustainability to internal and external stakeholders; and making sustainable decisions.	(Howard-Grenville, Bertels and Lahneman, 2014)	(Howard-Grenville, Bertels and Lahneman, 2014)

Source: Literature review.

# Chapter Eight

## 8. Intrinsic structures

Across the reviewed reviews, an influence from the characteristics of those led emerged as an important part of the leadership context. The factors in the intrinsic stratum pertain to the influence from the member characteristics themselves and from the heterogeneity between these characteristics. In a review of 50 years of diversity literature, Mannix and Neale (2005) concluded that diversity in workgroups should be considered from three vantage points as the causal powers of the diversity type differ. Firstly, the deepest level, the value-diversity, corresponds well with the cross-cultural research (Javidan *et al.*, 2006a; Javidan *et al.*, 2006b) and organisational culture research (Jung *et al.*, 2009). It pertains to the underlying assumptions guiding behaviour. Secondly, a category relating to deep-level differences in expertise, i.e. education, functional knowledge, information, skills, experience; and, personality, i.e. cognitive style, affective dispositions, or motivational factors (Mannix and Neale, 2005). Thirdly, a category of explicit social-category or surface-level differences pertaining to the member's demographic membership, i.e. race, ethnicity, gender, age, organizational tenure, status, religion, or sexual orientation (Mannix and Neale, 2005).

In the literature reviewed by Mannix and Neale (2005), this demographic diversity has resulted in mixed findings about the effect on the workgroup. In this study's reviewed literature, demographic diversity received little attention. In most instances, the reviewed literature concerns itself with characteristics and diversity at the two underlying levels rather than the surface-level attention (e.g. Berson *et al.*, 2006; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012). Expertise and personality exercise an influence on work and collaboration style, which is influenced by underlying values, but in their own right have causal tendencies contributing to diversity (Mannix and Neale, 2005). In continuation, Mannix and Neale (2005) concur with other authors finding that diversity in perspectives holds the potential for healthy task conflict, which can result in better group performance (Andriopoulos, 2001; Marta, Leritz and Mumford, 2005; Patel, Pettitt and Wilson, 2012). Hence, three clusters were identified as having causal effects on leadership and work performance through the content analysis of the reviewed literature: 1) Value composition and diversity; 2) Personality composition and diversity; and, 3) Expertise composition and diversity. These are discussed in the following sections as the last step in enriching the conceptual framework into a theoretical framework.

## 8.1 Value composition and diversity

The prototyping underpinning implicit leadership theory (Junker and van Dick, 2014) is fundamental to cross-cultural research (Dickson, Den Hartog and Mitchelson, 2003; Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). It relates to the social identity held by the individual (Gardner *et al.*, 2005). The self-categorization driving prototypical expectations leading to behavioural manifestation is influenced by the collective as discussed in the social stratum, but also by the intrinsic value settings brought into the context by the constituents (Junker and van Dick, 2014; Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). It implies that a leader must understand the individual value-based expectations to leadership and collaboration, or the more general tendencies if leading larger units or across different national cultures (House *et al.*, 2004; Hofstede, Hofstede and Minkov, 2010). Javidan and colleagues (2006a; 2006b) found that both Hofstede's cultural approach and the GLOBE Project are concerned with the operationalising of culture into dimensions, and giving guidance on which enactment style is most effective. Bass (1997) concurs and argues that the full-range leadership theory is universal but that the enactment style should vary due to differences in culture to maintain effectiveness. The distinction indicated by Bass (1997) between leader behaviour ranges and enactment style is also found in the GLOBE project. The GLOBE project focuses on leadership enactment style characteristics such as collaborative, orderly and consultative, while actual leader behaviours such as objective setting, empowering or delegating are not included (GLOBE, 2019)<sup>xvii</sup>. Hence, the criterion for 'outstanding' leadership becomes how well a leader matches the follower's implicit desired leader qualities such as being generous, decisive or compassionate (Javidan *et al.*, 2006a).

Cross-cultural leadership research pertains to how a leader should recognise and match value-based expectations and reconcile differences in behavioural expectations to create common ground (Dickson, Den Hartog and Mitchelson, 2003; Javidan *et al.*, 2006a). To reconcile value-based differences into a common ground of work norms, the leader needs to understand the value diversity as a starting point (Dickson, Den Hartog and Mitchelson, 2003; Javidan *et al.*, 2006a). In the GLOBE Project, this is done with a twofold perspective; understanding underlying societal values, and, identifying the actual practices of the members of a given culture (Javidan *et al.*, 2006a). Hence, a leader should pay attention to behaviour among the organisation's members, and talk to the people she leads about the individual's underlying expectations (Javidan *et al.*, 2006a). The individually held values influence the emergence of climates in the social stratum (Dickson, Den Hartog and Mitchelson, 2003), as the members of an organisation contribute to the shaping from their personal vantage point (Dragoni, 2005).

Societal culture dimensions, for example, individualism-collectivism, can be measured at the individual level (Dickson, Den Hartog and Mitchelson, 2003). However, for the individual, the societal values mix with a range of other antecedents influencing the individual's perception of how things ought to be, such as personal values, motivation and personality (Dragoni, 2005; Schneider, Ehrhart and Macey, 2013).

These findings correspond well with organisational climate and culture research (Denison, 1996; Schneider, Ehrhart and Macey, 2013). They indicate that if interested in understanding and shaping climates, the behavioural manifestation should be in focus (Jung *et al.*, 2009). However, only by also talking about expectations and reconciling<sup>xviii</sup> value diversity it will be possible for a leader to build a sufficient shared mindset (Berson *et al.*, 2006; Dionne *et al.*, 2004; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012). As discussed above, the value-diversity in the leadership context include, but cannot be limited to national cultural value differences.

From this vantage point, an analysis of the literature reviewed by Dickson, Den Hartog and Mitchelson (2003) revealed three seminal models of cultural values besides Hofstede and GLOBE. That is, the early work from Kluckhohn and Strodtbeck (1961)<sup>xix</sup>, work by Trompenaars (1993)<sup>xx</sup> inspired by Hofstede (1980), and work by Schwartz (1992)<sup>xxi</sup> on cultural values and the implications for work. In continuation, a review of these value-models was identified (Nardon and Steers, 2009) and chosen as the framework for value composition and diversity in the leadership context. Nardon and Steers (2009) suggested a “Big Five” of themes running across the models<sup>xxii</sup> discussed above supplemented with one more model; Hall (1981)<sup>xxiii</sup> in Nardon and Steers (2009). See appendix B for a description of the behavioural implications from the value dimensions. The first core value dimension, Hierarchy-Equality, focuses on the power distribution in an organisation. i.e. the extent to which power and authority should be distributed hierarchically or in more egalitarian and participative ways (Nardon and Steers, 2009). The next dimension is Individualism-Collectivism, which is about the beliefs about the role of individuals versus groups in social relationships, i.e. the extent to which social relationships should emphasise individual responsibilities and rights or collective actions and group goals (Nardon and Steers, 2009). Thirdly, the dimension of Mastery-Harmony, concerning the beliefs about if people should seek to live in harmony with their social and natural surroundings versus how much people should seek to change and control the surroundings (Nardon and Steers, 2009). In continuation, Nardon and Steers (2009) found that Monochronic-Polychronic time orientation, pertaining to how people consider time as fixed or as flexible, resulting in sequential attention to single tasks or simultaneous attention to multiple tasks converges across the models.

Finally, the dimension of Universalism-Particularism, patterning how the importance of rules versus relationships is considered in relation to behavioural control. That is, beliefs about how much laws, rules or formal procedures apply for all members of an organisation versus how much personal relationships, unique circumstances, or enacted in-group values should determine the accepted behaviour (Nardon and Steers, 2009).

The causal tendencies summarised by Nardon and Steers (2009) confirm that enactment of any placement on each of the five value dimensions can help or hinder leadership or work performance. That certain agency can mitigate negative effects of placement on any of the value dimensions remains clear from the focus on adapting leadership in the reviewed reviews (Berson *et al.*, 2006; Dionne *et al.*, 2004; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012) and the cross-cultural literature (Gundling, 2003; House *et al.*, 2004; Trompenaars and Hampden-Turner, 2012). Furthermore, that agency can shape the enactment of values by recognising them and addressing behavioural expectations remain clear from the cross-cultural focus on reconciliation (Gundling, 2003; Gundling, Hogan and Cvitkovich, 2011; Hampden-Turner and Trompenaars, 2000; Trompenaars and Hampden-Turner, 2012). Finally, there is an agreement in the literature that values exist on continuums of competing values. It implies that low value diversity will intensify the causal tendencies of any dimension, while high value diversity holds the causal tendency to impair effective collaboration (Mannix and Neale, 2005; Patel, Pettitt and Wilson, 2012) or foster creativity if acting in concert with sufficient common ground (Mannix and Neale, 2005; Patel, Pettitt and Wilson, 2012). The framework on value composition and diversity is summarised in table 35 on the following page.

**Table 35. Theoretical Framework, Intrinsic stratum. Value composition and diversity.**

<b>Definition</b>	<b>H<sub>60</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>61</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>62</sub>: A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context</b>
<p>The presence, level and distribution of values which guide our behaviour among the people in the leadership context. That is the composition and diversity of beliefs if authoritative or participative decision-making is best; if individual rights or group focus comes first; if we should drive change in the world or seek harmony; if we should be precise and sequential or flexible in our planning; and, if rules or relations are most important.</p>	<p>(Dickson, Den Hartog and Mitchelson, 2003; Hofstede, Hofstede and Minkov, 2010; House <i>et al.</i>, 2004; Javidan <i>et al.</i>, 2006a; Javidan <i>et al.</i>, 2006b; Junker and van Dick, 2014; Nardon and Steers, 2009)</p>	<p>(Andriopoulos, 2001; Chatman and Cha, 2003; Dragoni, 2005; Mannix and Neale, 2005; Marta, Leritz and Mumford, 2005; Nardon and Steers, 2009; Patel, Pettitt and Wilson, 2012; Schneider, Ehrhart and Macey, 2013)</p>	<p>(Berson <i>et al.</i>, 2006; Denison, 1996; Dionne <i>et al.</i>, 2004; Dragoni, 2005; Gundling, 2003 #730; Gundling, Hogan and Cvitkovich, 2011; Hampden-Turner and Trompenaars, 2000; House <i>et al.</i>, 2004; Nardon and Steers, 2009; Javidan <i>et al.</i>, 2006a; Jung <i>et al.</i>, 2009; Salas, Sims and Burke, 2005; Schneider, Ehrhart and Macey, 2013; Trompenaars and Hampden-Turner, 2012)</p>

Source: Literature review.

## 8.2 Personality composition and diversity

That the leader's personality is an influential antecedent to enacted leadership is well-supported (e.g. DeGroot, Kiker and Cross, 2000; Dickson, Den Hartog and Mitchelson, 2003; Hogg, Van Knippenberg and Rast, 2012a; Jokinen, 2005). However, related to the leadership context, it is the personalities of all members in the leadership context, including the leader, which is of interest as they are all engaged in the emergence of the group social identity (Hogg, Van Knippenberg and Rast, 2012b). Hence, the following review focuses on trait distribution and composition as a leadership context rather than the intrapersonal relations between the leader's traits and the enacted leadership.

Michie and West (2004) reported that personality traits are strong predictors of contextual performance (Michie and West, 2004), which is also confirmed in the job performance literature (Motowidlo and Van Scotter, 1994). Viswesvaran and Ones (2000) reported personality as linked to both task and contextual performance, highlighting the most robust finding on conscientiousness as a predictor of both types of job performance. Uhl-Bien et al. (2014) found that the followers' personalities influence leadership, when a leader and followers interact in the co-creation of leadership. Patel, Pettitt and Wilson (2012) found that team members' personalities influence work behaviour, communication preferences, collaboration, and the well-being of team members. Mannix and Neale (2005) reported that personality-heterogeneous groups produced higher-quality results when solving complex decision-making problems than personality-homogeneous groups. Several authors report that personality influences an individual's propensity to be creative in work settings (Andriopoulos, 2001; Berson *et al.*, 2006; Shalley and Gilson, 2004). Also, Brown, Treviño and colleagues (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005) drew upon extant research to propose that a person's agreeableness, neuroticism, and conscientiousness is related to ethical behaviour.

Explaining how personality influences expectations to leadership, Javidan and colleagues posited that personality is different from values, but together both influence the prototyping discussed in the previous section (Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). The emergence of Implicit Followership Theory further confirm that prototype fit with leader and co-followers is positively related to trust in the leader; OCB; job satisfaction; and exchange-quality (Junker and van Dick, 2014). Dinh et al. (2014) reported that how traits translate into behaviour is influenced by the context and the differences of events. Concurringly, Antonakis, Avolio and Sivasubramaniam (2003) posited that strong situations reduce the trait activation.

Moreover, in situations with more convergence on personality among members, the prototypical expectations to the leader are more consistent (Antonakis, Avolio and Sivasubramaniam, 2003), indicating that higher personality diversity results in 'weaker' situations.

The reviews reviewed revealed convergence towards the Five-Factor Model of personality or Big Five. The Big Five Dimensions converged across a range of personality inventories during the late 1980s and early 1990s and have since been considered central personality traits (John, Naumann and Soto, 2010). As described by Costa and McCrae (1992), the Big Five dimensions are neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness.<sup>xxiv</sup> Fleeson and Gallagher (2009) investigated how and to which extent trait standing manifests itself in behaviour. They defined trait activation from a frequency perspective, i.e. how strong is the relationship between a trait standing and the frequency with which an individual engages in the corresponding trait manifesting behaviour (Fleeson and Gallagher, 2009). Based on a meta-analysis of 15 experience-sampling studies spanning eight years, more than 20,000 reports of trait manifestations in behaviour were correlated to trait standing (Fleeson and Gallagher, 2009). Fleeson and Gallagher's (2009) findings are in line with a meta-analysis encompassing 162 samples from 117 studies<sup>xxv</sup> (Barrick and Mount, 1991); the development of the Personality Trait-Based Interactionist Model of Job Performance<sup>xxvi</sup> (Tett and Burnett, 2003) and a meta-analysis spanning 87 independent samples (Chiaburu *et al.*, 2011). Building upon these three studies, Judge and Zapata (2015) further developed the understanding of the Big Five traits' causal tendencies in the person-situation interplay<sup>xxvii</sup>. Judge and Zapata (2015) concentrated on how trait activation relates to job performance. The meta-analysis of 41 studies measuring task performance and 84 studies measuring overall job performance in conjunction with their trait activation analysis displayed relations as summarised in table 36 on the next page.

Judge and Zapata (2015) joined in with the studies reviewed above to confirm that the Big Five traits hold helping or hindering powers influencing agency, especially in weak situations. Furthermore, that other contextual factors can attenuate or intensify the behavioural manifestation of traits (Barrick and Mount, 1991; Chiaburu *et al.*, 2011; Judge and Zapata, 2015; Tett and Burnett, 2003). Also, that agency can mitigate trait manifestation as indicated by the concept of strong situations (Judge and Zapata, 2015), and that agency can stimulate or stifle the emergence and reproduction of trait manifestation, which is at the heart of exercising leadership (Avolio *et al.*, 2004a). In summary, personality composition and diversity in the leadership context concern the elements defined in table 37 displayed on the following page.



**Table 36. Big Five trait manifestation resulting in job-performance related to the context**

<b>Emotional stability</b> leads to higher job performance when work requires strong social skills; and, when one must frequently deal with angry or unpleasant people.
<b>Extraversion</b> leads to higher job performance when the job requires strong social skills; entails a competitive environment; when one primarily deals with friendly and pleasant people; and, when the job does not require a strong attention to detail.
<b>Openness</b> leads to higher job performance when work requires independence and in settings where the role contains strong innovation requirements.
<b>Agreeableness</b> leads to higher job performance when the role demands strong social skills; when the environment is less competitive; when work requires independence; when one must frequently deal with angry or unpleasant people; and, when the work requires close attention to detail.
<b>Conscientiousness</b> leads to higher job performance when work requires independence; when strong creativity/innovation demands are high; in jobs where one primarily deals with friendly or pleasant people; and, there was a negative relation to jobs requiring strong attention to detail.

Source: Results summarised from Judge and Zapata (2015).

**Table 37. Theoretical Framework, Intrinsic stratum. Personality composition and diversity.**

<b>Definition</b>	<b>H<sub>63</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>64</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>65</sub>: A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context</b>
The presence, level and distribution of traits which guide our behaviour among the people in the leadership context. That is the composition and diversity of emotional stability; extraversion; openness; agreeableness; and, conscientiousness.	(Andriopoulos, 2001; Berson <i>et al.</i> , 2006; Javidan <i>et al.</i> , 2006a; Javidan <i>et al.</i> , 2006b; Shalley and Gilson, 2004; Uhl-Bien <i>et al.</i> , 2014)	(Andriopoulos, 2001; Barrick and Mount, 1991; Berson <i>et al.</i> , 2006; Brown and Treviño, 2006; Chiaburu <i>et al.</i> , 2011; Dalal, 2005; Ehrhart, 2004; Fleeson and Gallagher, 2009; Judge and Zapata, 2015; Junker and van Dick, 2014; Michie and West, 2004; Morgeson and Humphrey, 2008; Motowidlo and Van Scotter, 1994; Patel, Pettitt and Wilson, 2012; Schoorman, 2007; Shalley and Gilson, 2004; Tett and Burnett, 2003; Viswesvaran and Ones, 2000)	(Antonakis, Avolio and Sivasubramaniam, 2003; Dinh <i>et al.</i> , 2014; Ehrhart, 2004; Judge and Zapata, 2015; Michie and West, 2004)

Source: Literature review.

### 8.3 Expertise composition and diversity

There is substantial support for the positive relations between knowledge, skills and experience and work performance in the reviewed literature. A pattern is that it is challenging to disentangle knowledge, skills, and transferable experience as it comes together in enacted expertise. However, three broad domains clustering around the performance effect of expertise emerged.

Firstly, the positive relation between task expertise, knowledge, experience and tenure pertaining to domain-specific task-oriented abilities and task performance is supported (Bell and Kozlowski, 2002; Benner and Tushman, 2003; Berson *et al.*, 2006; Dragoni, 2005; Elkins and Keller, 2003; Lavie, Stettner and Tushman, 2010; Mannix and Neale, 2005; Michie and West, 2004; Morgeson and Humphrey, 2008; Pawar and Eastman, 1997; Pearce, 2004; Piccolo and Colquitt, 2006; Viswesvaran and Ones, 2000; von Krogh, Nonaka and Rechsteiner, 2012; Wang *et al.*, 2011). Secondly, abilities, skills and adaptive expertise related to innovation, and creativity is found to lead to increased adaptive performance (Andriopoulos, 2001; Benner and Tushman, 2003; Berson *et al.*, 2006; Carroll, Levy and Richmond, 2008; Cogliser and Schriesheim, 2000; Dragoni, 2005; Elkins and Keller, 2003; Lavie, Stettner and Tushman, 2010; Mannix and Neale, 2005; Martins and Terblanche, 2003; Pawar and Eastman, 1997; Pearce, 2004; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012). Thirdly, contextual expertise, team working skills, collaborative and influencing abilities, tenure and experience related to the social interaction is reported conducive to contextual performance (Chatman and Cha, 2003; Cogliser and Schriesheim, 2000; Dionne *et al.*, 2004; Elkins and Keller, 2003; Mannix and Neale, 2005; Martins and Terblanche, 2003; Pearce, 2004; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012; Wang *et al.*, 2011). These three domains are discussed in the following sections to comprise the last factor in the theoretical framework: expertise composition and diversity.

#### 8.3.1 Task and functional expertise

In the seminal article on shared leadership, Pearce (2004) pointed to the team's tenure, task skills, knowledge and abilities as vital for shared leadership. Pearce (2004) considered shared leadership as full empowerment; and, that expertise is a crucial component in empowerment is underlined by Avolio *et al.* (2004b). Avolio *et al.* (2004b) draw upon the concept of personal mastery (Bandura, 1986) to argue that without the necessary skill level, individuals will not act empowered even when given the mandate.

In support, Michie and West (2004) reported expertise and mandate as the two critical drivers for employees to implement solutions more quickly than if problems having to be referred up the hierarchy. In continuation, Pearce contends that task complexity is mitigated by expertise diversity as no “*one individual can be an expert on all task components*” (2004, p. 49). In work design research, Morgeson and Humphrey (2008) stressed that worker expertise should be developed to match the requisite work demands. Morgeson and Humphrey (2008) reported that requisite task expertise leads to higher task performance. Also, that the abilities to set goals for one's work; and, monitor progress and adjust own effort towards goal attainment influence task performance (Morgeson and Humphrey, 2008). Concurringly, Patel, Pettitt and Wilson (2012) and Piccolo and Colquitt (2006) stressed the importance of understanding skill demands from the work context. Other authors concur that the expertise level in the team or organisation impacts performance (Andriopoulos, 2001; Griffin, Neal and Parker, 2007; Jokinen, 2005).

Furthermore, Dragoni (2005) found that purposeful skill development positively influences task performance, while Lavie, Stettner and Tushman (2010) stated that skills are key in creating a reliable organisational performance. Michie and West (2004) found that skill mix and skill retention is critical for enhancing organisational performance. They also found that training and organisational performance is positively related (Michie and West, 2004). Viswesvaran and Ones (2000) reported findings that task-related ability has a significant impact on task performance, but also plays a role for contextual performance in line with Pearce's (2004) empowerment argument. The relation is further supported by Gardner et al. (2005), who found that task expertise positively influences co-workers to trust in the expertise-holder. Elkins and Keller (2003) found that subordinate expertise positively influences team performance and that higher technical skills, team tenure and connectedness to knowledge communities substitute the need for vertical leadership. Piccolo and Colquitt (2006) found that acquiring task-related skills is key in affecting work quality, while Bell and Kozlowski (2002), in their research of virtual teams, found that access to skills increases team performance. Carroll, Levy and Richmond (2008) concur and state that task-related skills increase the capacity to improvise in problem-solving.

### *8.3.2 Creative and adaptive expertise*

Shalley and Gilson (2004) reported that innovation requires skills, such as generating alternatives through divergent thinking, suspending judgement, and evaluating ideas. Moreover, that the practice of comparing and contrasting ideas is vital to innovation, which, in turn, warrant the importance of expertise diversity (Shalley and Gilson, 2004).

Furthermore, the adaptive expertise must be related to domain-specific expertise, i.e. insight into the relevant task, technology, and methods to result in innovation (Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012). Interestingly, Mannix and Neale (2005) report similar findings indicating that adaptive expertise seems to be a team expertise stemming from the interaction between levels of different task expertise and the range of difference in these task-related skills. In continuation, Mannix and Neale (2005) found that to overcome process issues attenuating the benefits of task expertise diversity, group-process skills such as communication, decision-making and conflict handling are necessary. Relatedly, Andriopoulos (2001) and Berson et al. (2006) found that skills diversity in a team promotes creativity. Also, Berson et al. (2006) found that communities of practice promote learning and expertise development. Together it indicates that adaptive expertise pertains to the task-skill diversity and the learning expertise in concert.

Dragoni (2005) found that learning expertise is a cornerstone in adaptive performance. It relates to the practices of learning from mistakes, experimenting with new work approaches, and exchanging constructive feedback on how to improve. A similar focus on learning is found with Cogliser and Schriesheim (2000), who report that to drive performance; the leader should promote the exchange of technical expertise, experience sharing and job-related peer to peer learning. Joining in, Martins and Terblanche (2003) found that creative thinking skills promotes adaptive performance and creates a learning culture. Increased expertise diversity calls for more shared leadership to gain adaptive benefits from diversity (Pearce, 2004; von Krogh, Nonaka and Rechsteiner, 2012). Pearce (2004) found that volatility, ambiguity and complexity effects are mitigated by adaptive expertise. Pearce (2004) also found that shared leadership seems unlikely to be effective if the knowledge worker lacks requisite abilities, knowledge and skills, contending that *“members should be added to the team only if they have mission-critical knowledge, skills, or abilities”* (p. 50). In the exploration, exploitation and ambidexterity literature, there is substantial support for considering both task and adaptive expertise as important performance drivers. Lavie, Stettner and Tushman (2010) stated that if exploration and exploitation *“entail distinctive sets of skills and capabilities, exploration must be inversely related to exploitation at any given time”* (p. 116). It implies that considering expertise composition and diversity is a cornerstone in promoting adaptive performance in pursuit of exploration or task performance to pursue exploitation (Berson *et al.*, 2006; Lavie, Stettner and Tushman, 2010). In addition to task and adaptive performance, the third domain of expertise is reviewed in the next section.

### 8.3.3 Collaborative and contextual expertise

The social interactional expertise resulting in more OCB, i.e. contextual expertise, seems to intensify the positive effects of task expertise and adaptive expertise (Mannix and Neale, 2005). Mannix and Neal (2005) reported that teams with a low collective identification experience hindering effects of expertise diversity, while for teams with high collective identification expertise diversity resulted in a higher task and learning performance. Along the same lines, Martins and Terblanche (2003) found that effective teamwork rests upon both the expertise levels and the ability to collaborate within the group. The findings indicate that contextual expertise can intensify or attenuate the positive causal powers of task or adaptive performance (Mannix and Neale, 2005). A similar argument came from Pearce (2004), who posited that less-skilled workers will be receptive to “*constructive prescription and direction*” (Pearce, 2004, p. 53), only given that the contextual expertise is mature enough. Along the same lines, Salas, Sims and Burke (2005), in their investigation of effective teamwork, found that interpersonal skills and self-management skills positively influence team effectiveness. Moreover, effective teamwork is driven by shared mental models together with the needed team skills such as backup behaviour and mutual performance monitoring (Salas, Sims and Burke, 2005).

At the organisational level, Pawar and Eastman (1997) exemplify the positive effects of contextual expertise. Pawar and Eastman (1997) found that organisational expertise, i.e. knowing who has which expertise and how to access it, contributes to organisational ability to reorient in response to external changes. Pawar and Eastman (1997) also found that skill standardisation positively influences coordination, indicating that a lack of contextual expertise can be mitigated through formalization. It indicates that expertise should be understood in context and that the expertise composition and diversity influences leadership, which is also confirmed in other studies. For example, Michie and West (2004) found that the effect of skills and knowledge is related to the organisational context, i.e. activated in conjunction with protocols, procedures, and ways of working. Similar findings are reported by Carroll, Levy and Richmond (2008), who recognise that skills need to be incorporated into the context to result in optimal performance.

Related hereto, Dionne et al. (2004) found that the collaboration-skill level in a team influences the effect of transformational leadership. A similar indication came from Cogliser and Schriesheim (2000), who found that a leader's expert power is positively related to LMX-quality in within-group dynamics. Together, it indicates that adaptive and task expertise interacts with contextual expertise to influence team effectiveness.

As shown, in concert, the three expertise types and their diversity can help and hinder leadership and work performance. Agency can mitigate the negative causal powers of expertise deficiencies or lack of expertise diversity. Through the facilitation of learning processes, expertise levels can be changed. Also, certain expertise components can attenuate or intensify the effects of other present or deficient expertise factors. In sum, the theoretical framework on expertise composition and diversity is displayed in table 38 below. In the following chapter, the methodology for the field research leveraged by the theoretical framework is described.

**Table 38. Theoretical Framework, Intrinsic stratum. Expertise composition and diversity.**

<b>Definition</b>	<b>H<sub>66</sub>: Has causal powers to influence the choice of leadership behaviour</b>	<b>H<sub>67</sub>: Has causal powers to help or hinder leadership and/or work performance</b>	<b>H<sub>68</sub>: A leader can change the expertise composition and diversity in their leadership context within the limitations given by the organisational and external context</b>
The presence, level and distribution of expertise which influence behaviour among the people in the leadership context. That is the composition and diversity of task-, adaptive-, and contextual expertise.	(Cogliser and Schriesheim, 2000; Elkins and Keller, 2003; Pawar and Eastman, 1997; Pearce, 2004; von Krogh, Nonaka and Rechsteiner, 2012)	(Andriopoulos, 2001; Avolio <i>et al.</i> , 2004b; Bell and Kozlowski, 2002; Berson <i>et al.</i> , 2006; Carroll, Levy and Richmond, 2008; Dionne <i>et al.</i> , 2004; Dragoni, 2005; Gardner <i>et al.</i> , 2005; Griffin, Neal and Parker, 2007; Lavie, Stettner and Tushman, 2010; Mannix and Neale, 2005; Martins and Terblanche, 2003; Michie and West, 2004; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Pearce, 2004; Piccolo and Colquitt, 2006; Salas, Sims and Burke, 2005; Shalley and Gilson, 2004; von Krogh, Nonaka and Rechsteiner, 2012)	(Andriopoulos, 2001; Avolio <i>et al.</i> , 2004b; Berson <i>et al.</i> , 2006; Carroll, Levy and Richmond, 2008; Mannix and Neale, 2005; Martins and Terblanche, 2003; Michie and West, 2004; Morgeson and Humphrey, 2008; Patel, Pettitt and Wilson, 2012; Pawar and Eastman, 1997; Pearce, 2004; Piccolo and Colquitt, 2006)

Source: Literature review.

# Chapter Nine

## 9. Research paradigm and methodology

This chapter outlines the research paradigm applied in this study from the philosophical orientation to the methods applied. The development of the conceptual and theoretical framework was shaped by a critical realist philosophical orientation for the reasons accounted for in the previous chapters. In this chapter, the focus is the ontological, epistemological and methodological positions and choices; how they align with each other, with the phenomena under investigation and with the study's purpose.

### 9.1 Philosophy and leadership context

A long-standing debate in the natural and social sciences about what is reality, i.e. ontology, has been between realism and relativism/nominalism (Blaikie, 2010; Easterby-Smith, Thorpe and Jackson, 2015). Considering the leadership context from a realist position would assume that there is a single truth with only concrete observable elements with observable effects (Blaikie, 2010; Easterby-Smith, Thorpe and Jackson, 2015). Conversely, a relativistic world view would consider the leadership context as created by people through their language, and hence leadership context would be a discourse varying from person to person (Blaikie, 2010; Easterby-Smith, Thorpe and Jackson, 2015). A modification of the realist position is the internal realist position, which would consider that there is a reality separate from our minds, but also that parts of this reality cannot be observed and accessed directly (Easterby-Smith, Thorpe and Jackson, 2015). Hence, the internal realist would accept the existence of approximations of any non-observable elements in the leadership context if effects hereof are observed (Easterby-Smith, Thorpe and Jackson, 2015). Moving along the continuum further towards the relativist end there is a relativist position which emphasises that reality is created by the people involved and that any shared reality exists through the accumulation and acceptance of ideas about the world (Easterby-Smith, Thorpe and Jackson, 2015). Flowing from the distribution of world views along the continuum between ontological realism and relativism/nominalism a range of epistemological assumptions ranging from positivism, i.e. epistemological realism to constructivism, i.e. epistemological relativism, has emerged (Easterby-Smith, Thorpe and Jackson, 2015). Epistemology is concerned with what knowledge about the world can be acquired and how this knowledge can be acquired (Easterby-Smith, Thorpe and Jackson, 2015).

On the one hand positivism rooted in naïve realism presumes that there is one reality and that is possible to uncover universal knowledge by reducing problems into their simplest possible elements; operationalise reality into measurable facts; uncovering causality and laws about regularities; and, generalise these laws to the wider population by investigating a random representative sample (Easterby-Smith, Thorpe and Jackson, 2015). On the other hand, social constructivism rooted in relativism presumes that there are multiple realities as the observers are part of what is being observed; that rich understanding of matters in-depth rather than uncovering law-like regularities is the aim of research; that research must include the complexity of the 'whole' and avoid reductionism; and, that generalisation must rely on theoretical abstraction (Easterby-Smith, Thorpe and Jackson, 2015). As a reaction to the long-standing ontological debate, Critical Realism emerged through a critique of the prevalent ontological positions in the 1970s (Danermark, Ekström and Karlsson, 2019). From a critical realist perspective positivism suffers from a fundamental error, which is that *"the reality is reduced to what can be perceived by our senses"* (Danermark, Ekström and Karlsson, 2019, p. 9), or in other words ontology is reduced to epistemology. In relation to leadership context, such a stance would fail to consider the depth of the social structures which are part of leadership context and their underlying mechanisms. On the other hand, an extreme constructionist position would posit that *"No description is superior to any other with respect to capturing the intrinsic nature of something"* (Danermark, Ekström and Karlsson, 2019, p. 10), or in other words, while recognising the importance of describing the unobservable, the position gives up on theoretical generalisation through abstraction. In relation to this study's purpose, such an extreme constructionist position would fail to produce a framework which can serve as a common language. However, a constructionist position raises the importance of acknowledging a necessary level of epistemological relativism. These tensions indicate a need to account for this study's ontological and epistemological positions as well as how these positions translate into the methodology, which is what follows in the coming sections.

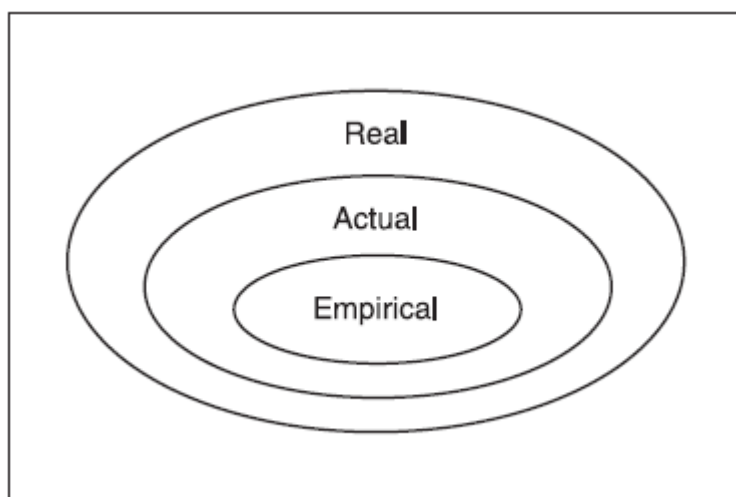
### 9.1.1 Ontological realism

Critical Realism assumes ontological realism. It is the stance that reality has an objective existence, comprising intransitive elements, which are the objects of reality (Danermark, Ekström and Karlsson, 2019; Bhaskar, 2018). These objects exist and act independently from our theories about them, making facts theory dependent, while recognising that reality is not theory determined (Danermark, Ekström and Karlsson, 2019; Bhaskar, 2018).



Recognising that the world a leader operates in is an open system with no constant conjunctions, as in a closed system, is part of the ontological realism contending that both observable and non-observable generative mechanisms exercise an influence (Bhaskar, 2018). This ontological realism also recognises that such generative mechanisms cannot be considered universal laws which govern reality due to their existence in an open system; while also recognising that such mechanisms do hold causal tendencies to operate in a certain manner when triggered (Danermark, Ekström and Karlsson, 2019). In the open system, multiple mechanisms will be acting and interacting at the same time, which according to Critical Realism encompasses events in three related domains; the real; the actual; and the empirical (Bhaskar, 2018; Elder-Vass, 2007). See figure 4.

**Figure 4. Bhaskar's three ontological domains**



Source: Elder-Vass, 2007, p. 162.

In a leader's context, events which the leader is not aware of will be occurring; however, that does not change the fact that these events are actual (Bhaskar, 2018). Beneath these actual events, there are factors with generative mechanisms which can be active without observable manifestation in the actual domain because other mechanisms keep them in check (Bhaskar, 2018). In the leadership context, such factors in the real domain that we cannot directly access, but which possess causal tendencies, are found in both the intrinsic and social strata. Naturally, the leader can also experience an event, and that would place it in the empirical domain, which is the layer of the world comprising human perceptions and experiences (Bhaskar, 2018). Ontological realism fosters recognition that the real and the actual domains cannot be reduced to the empirical as this would be an epistemic fallacy (Bhaskar, 2018).

The epistemic fallacy concerns reducing reality to only what is in the empirical domain, or what is present (Bhaskar, 2018). In the literature, such an epistemic fallacy is widespread in the treatment of leadership and organisational context (Johns, 2018). However, understanding what is absent is equally important (Danermark, Ekström and Karlsson, 2019) as eliminating such absence can be of great interest for a leader, e.g. the absence of a strong climate for safety can be just as important as the presence of a strong climate for collaboration in a particular situation. Moreover, acknowledging that factors exist in the domain of the real is important as these factors, which we cannot experience through our senses, e.g. the traits or values of a person, hold causal powers which may, or may not, manifest themselves in the domain of the actual or empirical (Bhaskar, 2018). In some instances, a leader must act on the assumption that a certain causal tendency, for example, that a conscientious person would impose structure on a team's working approaches, is counteracted by another causal mechanism, for example, a weak climate for diligence and discipline. By strengthening the climate for diligence and discipline, the leader would be able to remove the counteracting power holding back the structuring effects of certain conscientious team members. To address such matter, a leader would need a language to be able to talk about it, which relates to what Bhaskar (2018) talks about as the transitive objects of science, which we turn to in the following section.

### *9.1.2 Epistemic relativity*

Ideas, beliefs, and theories are products of society and change over time, making knowledge transitive in opposition to reality which is intransitive (Bhaskar, 2018; Danermark, Ekström and Karlsson, 2019). Epistemic relativity is a cornerstone for constructionists, who would posit that truth itself is relative and that it is not possible to arrive at shared perceptions as our constructions of reality differ culturally (Porpora, 2015). In conjunction with epistemic relativity Critical Realism contends that it is possible to arrive at shared conceptions of the world as not all constructions of reality are equally warranted, and some conceptions will gain support from more actors (Porpora, 2015). This consensus about conceptions revolves around the certainty of the epistemic truth, which of course cannot be equated with ontological truth. However, certainty accumulates when actors experience cases which can be explained with the available epistemic truth (Bhaskar, 2018). Considering epistemic relativity while also believing that not all constructions of the world are equally warranted includes the recognition of fallibilism, which is that our theories, ideas, and beliefs may be replaced by better theories or descriptions of reality over time (Bhaskar, 2018).

This notion presupposes that there is a truth to be replaced, which is an argument differentiating critical realists from strong constructionists who cannot subscribe to fallibility as all worldviews are equally valuable (Porpora, 2015). Thereby Critical Realism recognises the existence of what could be termed a consensual truth, which gains its value from the explanatory power agreed by many actors as they compare the consensual truth to their encounters in the world. From fallibility follows that there can be strong arguments for choosing a certain theory about the world to another, but the criteria for determining which theory is most valuable can differ (Bhaskar, 2018). To build on the existing strong arguments in the literature, this was the reason for undertaking an integrative literature review (Torraco, 2016) in the attempt to include only well-warranted knowledge about leadership context, as not all knowledge is equally fallible (Danermark, Ekström and Karlsson, 2019). The epistemic relativity and the related fallibilism suggest that to investigate the world one should actively apply existing theory as *“ideas and concepts are necessary to identify and collect the information that is potentially relevant”* (Ackroyd and Karlsson, 2014, p. 21). Hence, it also implies that such theory should be synthesised with new available ideas and data that better meet the criteria for including concepts and beliefs in the theory (Ackroyd and Karlsson, 2014). This mechanism relates to judgemental rationality, which is discussed in the next section. Our knowledge is influenced by the varied preunderstandings and experiences, yet, as the literature review showed it is possible to find a *“reasonably fixed point”* (Danermark, Ekström and Karlsson, 2019, p. 22) to depart from when the ambition is to describe the nature of reality. This study attempts to establish such a fixed point, or consensual truth, to depart from when it comes to leadership context through a process centred around fallibility.

### 9.1.3 Judgemental rationality

As an essential part of epistemic relativity, fallibilism fosters the concept that someone makes a judgment about when and why another belief should replace an existing idea or theory, and underpinning that judgment lies the process of judgemental rationality (Bhaskar, 2018). If this judgement resides with each agent without any value-laden criteria from the collective, it can be considered judgemental relativism (Cruickshank, 2012). Judgemental relativism removes the critical assessment inherent in critical realism and necessary when operating in a business context where multiple sets of criteria ascribing value to interpretations exist (Cruickshank, 2012) and are necessary to create the shared schemes underpinning effective organisational functioning (Luhmann, 1995).

This critical assessment, necessary when leading in pursuit of organisational intentions and warranting critical realism, relates to judgemental rationality. Judgemental rationality is the idea that when applying theory, it is necessary to choose between relative beliefs to find the best suitable representation of reality to serve the purpose pursued (Bhaskar, 2018). Consequently, judgemental rationality presupposes that it is possible to find criteria by which to determine a preference for one kind of knowledge over another (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019). In this sense, Critical Realism refutes the positivist assumption that one objective reality exists; and accepts the relativist position that knowledge is socially produced, but also that not all knowledge is equally valuable (Danermark, Ekström and Karlsson, 2019). Hence, judgemental rationality hinges on clarifying the evaluation criteria when deciding which knowledge should be preferred, highlighting the importance of clear inclusion criteria for developing the framework for leadership context. The nature of leadership in business organisations concerns intentional agency to influence other agents in the pursuit of a specific organisational purpose. Hence, a leader cannot accept the judgemental relativism inherent in constructionism, holding that there is no meaningful perception of reality beyond individual discourse that knowledge claims can be assessed against (Bhaskar, 1998; Cruickshank, 2012). Judgemental relativism would make all perceptions equally valuable and true (Bhaskar, 1998; Cruickshank, 2012). However, not all perceptions can be held as equally valuable and converted into agency for business organisation members as the constituents need to act following the company codes (Brown and Treviño, 2006; Brown, Treviño and Harrison, 2005). Because a leadership context framework should support a recurring critical assessment of the context applying judgemental rationality with the organisational intentions as criteria, constructionism is refuted as a potential research paradigm due to its inherent judgemental relativism (Bhaskar, 1998).

In continuation, judgement rationality relates to the explanatory logic of abduction, which concerns re-describing the observable everyday data and adding theory to this data while applying the explanatory power of the suggested ideas as a criterion for the relevance of the abduction (Blaikie, 2010; Danermark, Ekström and Karlsson, 2019; O'Mahoney and Vincent, 2014). A range of the empirical findings in the literature reviewed has been re-contextualised into the developed understanding of leadership context, i.e. subjected to abduction through the integrative literature review; an example being exploration and exploitation, which were reinterpreted into leadership intentions. Furthermore, an important part of abduction is the exposure to more cases which can confirm, dismiss, modify, or refine parts of the theory to arrive at an even better explanatory power (Danermark, Ekström and Karlsson, 2019). In turn, judgemental rationality is also related

to retroduction, which concerns suggesting explanations about how the world must be for the observable mechanisms to be as they are (Danermark, Ekström and Karlsson, 2019). The conceptualisation of leadership context into five strata is an example of such retroduction, anchored in the question: what must leadership context be for the contextual effects identified in the literature to be as reported? The abductive and retroductive differ in their proximity to the empirical domain. Retroduction is related to suggesting the prerequisites for leadership context to exist, while a line of inference from the explanations suggested through abduction can be drawn to corresponding manifestations in the empirical domain (Danermark, Ekström and Karlsson, 2019; O'Mahoney and Vincent, 2014). Critical Realism seeks not to generalise about populations, but about theoretical propositions concerning certain phenomena (Danermark, Ekström and Karlsson, 2019; O'Mahoney and Vincent, 2014). What makes this possible is the abduction from the observed empirical causal effects in the reviewed literature to causal tendencies, which form the basis for theoretical generalisation (Ackroyd and Karlsson, 2014).

Such theoretical generalisation can be tested for fallibility by accepting judgemental rationality focused on consensual truth about explanatory power related to the contextual effects on the intentional agency (Ackroyd and Karlsson, 2014). As such, the critical assessment of explanatory value inherent in critical realism reflects exactly the expertise necessary to build a framework of a complex open system and refutes taking either a positivist or a constructionist stance. This rationale was the reason for choosing a method appropriate for this study's purpose. To accommodate for the ontological-epistemological position described above and facilitate the process of judgemental rationality, a Modified Delphi approach was chosen for this study. Even though no studies arguing for their choice of this method in a similar manner were identified, it is well warranted that a modified Delphi approach is well suited for theory building (Brady, 2015; Keeney, Hasson and McKenna, 2011; Okoli and Pawlowski, 2004; Skinner et al., 2015). Besides the Modified Delphi approach also grounded theory (Charmaz, 2014; Corbin and Strauss, 2015) and the repertory grid technique (Cassell and Walsh, 2004) were considered. Both methods focus on accessing individual constructs and rely on abduction by categorising constructs into themes (Cassell and Walsh, 2004; Charmaz, 2014; Corbin and Strauss, 2015). The Delphi approach was chosen due to its clear operationalisation of the judgemental rationality as discussed above and because the study's purpose is to create a widely applicable framework. It was assessed that both a grounded theory and a repertory grid approach would be too resource-intensive due to the magnitude of factors identified in the literature. The following sections contain an outline of the applied methodology.

## 9.2 The Delphi method

The Delphi method was developed by the RAND Corporation in the 1950s, for the purpose of reaching reliable consensus among experts about judgements related to the forecasting of events, the importance of issues, or effect of choices (Dalkey and Helmer, 1963; Linstone and Turoff, 1975). Warranting the use of the methodology in this study is that the Delphi method is well suited when issues are complex and can benefit from subjective expert judgements by experts representing diverse backgrounds and contexts (Linstone and Turoff, 1975). The traditional Delphi study starts with collecting open-ended input from the participating experts, which is used to comprise a list of items which should be prioritised or propositions where the agreement is to be investigated. The first-round input is converted into a survey with scale ratings or rank ordering which is used in subsequent rounds where consensus is built by repeating an assessment in a panel of experts (Keeney, Hasson and McKenna, 2011). The emergence of the Modified Delphi approach, which, in contrast to the traditional approach, leverages existing knowledge from the literature as a starting point, makes the method suitable for theorising in complex domains (Okoli and Pawlowski, 2004). A key feature strengthening the generalizability when applying the Delphi approach is the access to a very wide range of experience among the experts *“increasing the likelihood that the resulting theory will hold across multiple contexts and settings”* (Okoli and Pawlowski, 2004, p. 27). Furthermore, the Delphi methodology is well-suited for complex and difficult issues that span a heterogeneous and very large population making consensus rather than generalisation from a representative sample a more appropriate theory validation mechanism (Okoli and Pawlowski, 2004). These well-warranted experiences with the Modified Delphi approach align well with the previous ontology-epistemology discussion; hence, this study followed a modified approach. The methodology is a controlled iterative feedback process where the group consensus and dissensus (non-consensus) on the questions and themes are shared back to the panellist in the subsequent rounds with a request for them to revise their answers to converge towards the consensus (Keeney, Hasson and McKenna, 2011). The rounds are repeated until the fulfilment of predetermined stopping criteria. Such criteria can be when a predetermined level of consensus is reached; when answers are stable but have not necessarily reached the predetermined level of consensus; or, when the stipulated number of rounds have been undertaken (Keeney, Hasson and McKenna, 2011). In this study, it was planned to stop after three rounds, or when the predetermined level of consensus was reached. In the traditional Delphi the first round is often used for soliciting input from the experts to comprise the framework which can then be investigated for agreement in the subsequent rounds (Keeney, Hasson and McKenna, 2011).

In the modified Delphi methodology applied, in round 1, experts were asked to provide input on further relevant factors in the leadership context and to comment on, or contest, the relevance of the factors, causal effects or the overall structure of the suggested framework. Okoli and Pawlowski (2004) emphasised some vital elements in the method: 1) Developing the instrument, 2) Recruiting experts, and 3) Analysing results. For each of the elements in a Delphi study, it is important for the trustworthiness to maintain a description of the key methodological and theoretical choices made (Skulmoski, Hartman and Krahn, 2007); hence, the following descriptions serve that purpose.

### *9.2.1 Developing the instrument and piloting*

The integrative literature review (Torraco, 2005; Torraco, 2016) in the previous chapters supplied the theoretical framework for round 1 of the modified Delphi study. The Modified approach of using a theoretical framework in round 1 is in line with other studies, for example, Raine (2006), who implemented a four-round Delphi to revise an existing, but outdated, framework used to guide physiotherapists in their work. Another example is Grisham (2009), who investigated the universality of leadership attributes across national cultures through a Modified Delphi study based on a framework developed from a literature review. The initial survey instrument was developed from the theoretical framework guided by the Handbook of Survey Research (Krosnick and Presser, 2010), and subsequently piloted to enhance the performance of the survey. One important consideration in the design of the survey instrument was the magnitude of the survey. The theoretical framework developed through the integrative literature review warrant the existence of 68 hypotheses whereof some of the causal mechanisms are compound in two dimensions. Firstly, in many hypotheses the causal effects are directed towards either leadership or work performance, or both. Secondly, in some hypotheses the causal mechanisms warranting including in leadership context encompass either helping effects or hindering effects, or both. In general, double barreled questions should be avoided (Krosnick and Presser, 2010). However, splitting all hypotheses into Single Stimulus Questions, for example: “..has causal powers to help leadership”; “..has causal powers to hinder leadership”; “..has causal powers to help work performance”; and, “..has causal powers to hinder work performance” would result in a significant increase in questions. It was decided to keep the questions as “The [contextual factor] can help or hinder either leadership or work performance, or both.” The use of “or” allows the respondent to agree or disagree even if only parts of the questions can be confirmed, removing the double-barreled dilemma (Menold, 2020).

Menold (2020), who investigated Double Barreled Questions (DBQ) and their effect on measurement quality, defined double barreled questions by their inclusion of “and” creating the dilemma that all included components in the question must be confirmed together. Conversely, Menold (2020) does not consider questions constructed with “or” as double barreled, because a respondent can “*select a stimulus and can disregard the other. In the case of “and” and similar DBQ constructions, such a choice is not offered from the outset*” (p. 857). Grant Levy (2019), who also investigated DBQ agreed that constructing questions with “or” can make questions complex; but, for them to trigger the double barreled problem they must have “and” structures. Moreover, the cognitive capabilities of the respondents support that validity is not threatened by complex questions (Menold, 2020). Also, that either of the causal effects on either leadership or work performance, or both, warrants the inclusion in leadership context; and, that investigating this is the purpose of the study was included in the video included in the introduction of the survey. See appendix C for a link to the video and a transcript of the video. It was decided to organise the survey with the factors in the determinant stratum first rather than begin with the intentionality stratum. That because ending with the intentionality factors would allow the respondent to recall which contextual factors could be shaped to promote an intention. See appendix D for the piloted survey questionnaire, and appendix E for the adjusted survey instrument used in round 1.

The adjustments from the pilot are reported in Chapter 10. Such piloting to optimise clarity and understandability of the instrument is recommended by many authors (e.g. Skinner et al., 2015; Skulmoski, Hartman and Krahn, 2007). For the pilot, the cognitive interviewing method was applied (Willis, 1999; Willis, 2015). Cognitive interviewing is focused on the cognitive processes used by participants when answering surveys and focuses on their comprehension of the questions and formulations; the information retrieval from memory; and their decision processes. The pilot survey was tested with seven experts who resembled the target panellists, hereunder the two thesis supervisors, and three experts on survey design. In the test, the experts answered the survey online, and shortly thereafter, a structured cognitive interview was conducted over skype or phone. In the follow-up interview, the verbal probing technique was applied (Willis, 2015) by following the survey structure and using the appropriate probing questions displayed in table 39 underway.



**Table 39. Questions, cognitive interviewing**

Introduction texts and introduction video	Please comment on the clarity of the introduction video. Please comment on the clarity of the introductory texts. For both: <ul style="list-style-type: none"> <li>• Point to anything that was difficult to understand.</li> <li>• Suggest any additions that would make it even better.</li> </ul>
Factor definitions and information retrieval	Please identify the factor definitions you struggled most with and comment on your comprehension of the definition. <ul style="list-style-type: none"> <li>• Point to anything that was difficult to understand or unclear.</li> <li>• Did you have to read the definition more than once?</li> <li>• What came to mind when reading the definition?</li> </ul>
Decision process	Please identify the factors where deciding your agreement was more difficult and comment on how you arrived at your decision. <ul style="list-style-type: none"> <li>• What made the decision more difficult?</li> <li>• Suggest any additions which could make deciding easier.</li> </ul>
Other issues or suggestions	Please comment on any other issues which hindered your ability to complete the survey. Please share any suggestions for optimisation of the survey.

Question design guided by Willis (1999; 2015)

The advantages of using prepared probing questions for the pilot was that the interviews were focused, and the qualitative data collected were more easily aggregated and turned into adjustments of the instrument (Willis, 2015). Another choice when developing the instrument is the practical distribution and survey setup. Given the dispersion of the experts and the proficiency in using online media indicated by their presence on LinkedIn, the survey was prepared as an electronic questionnaire to be distributed via e-mail. E-questionnaires are quicker and less expensive than paper-based versions and provide access to experts across geographies and time zones (Wright, 2017). Wright (2017) listed a cross-section of available survey software, which was used to investigate survey software appropriate for Delphi research. Most of the listed software did not offer functionality for handling multiple related survey rounds; hence, the market was investigated for survey software tailored for Delphi studies. A comparative analysis from 2017 reported that several software systems for Delphi exist (Aengenheyster *et al.*, 2017). After testing three systems, the Mesydel software (mesydel.com) was chosen for this study's field research. Mesydel is tailored for Delphi studies and developed by a team of researchers from the University of Liège in Belgium.

### 9.2.2 *Selecting and recruiting experts*

Panels should be comprised based on their expertise within the field and relying on expert judgements raises the important issue of selecting experts carefully (Brady, 2015; Okoli and Pawlowski, 2004; Skinner *et al.*, 2015; Skulmoski, Hartman and Krahn, 2007); hence, a lot of attention went into choosing experts to invite. In this study, experts should have expertise across the variation of the causal effects of the factors in the leadership context spanning the five strata. To ensure this variation five main selection criteria were identified for selecting relevant experts, 1) Spread across industries, 2) Functional spread, 3) Geographical reach, 4) Tenure, and 5) Experience from multiple organisations. Spread across industries is identified as a driver of contextual differences pertaining to all five strata (Chatman and Jehn, 1994; Gordon, 1991). Functional spread drives contextual differences (Elkins and Keller, 2003; Mannix and Neale, 2005), and so does leading across different geographies (Javidan *et al.*, 2006a; Javidan *et al.*, 2006b). Moreover, the ability to compare and contrast is important in theorising (Charmaz, 2014; Corbin and Strauss, 2015) which warrants the criteria of having experience from different organisations to be an expert. Experiential learning theory shows that it takes time to accumulate knowledge, experience and reflexivity regarding learning from own experience (Kolb and Kolb, 2019; Kolb and Kolb, 2009). Hence, tenure in conjunction with exposure to different contexts is a relevant criterion for practitioner experts. Applying these criteria make leaders fulfilling the criteria relevant as experts; hence a Delphi panel comprising leader experts was established. In this panel, a threshold of 15 years of leadership experience across at least two different companies was applied. The fifteen-year threshold was set based on this Author's experience warranting that at this point, a leader fulfilling the other criteria have built the reflexivity to assess the causal effects in the leadership context.

Furthermore, Human Resource (HR) managers and consultants working with leadership development or assessment in or for organisations, can fulfil the criteria through their position as first-hand observers. Hence, a Delphi panel comprising HR experts was established. The HR experts fulfil the industry and functional spread criteria through their first-hand case-by-case engagement with leaders in different industries and in different functions. Moreover, the geographical reach criteria will be met when they have worked in different countries or possess a function with geographical reach across borders. Furthermore, any of these criteria can also be fulfilled through personal experience in previous positions, either in HR or as a leader. Also, in the HR Panel, a threshold of 15 years of HR experience across at least two different industries was applied.

In addition, as their expertise rests upon their ability to make sense of observations; a higher educational level was considered as contributing to their expertise because it increases the sense-making ability, and higher educated HR experts were preferred.

Lastly, a Delphi panel comprising Academics researching leadership was established. Academic experts have expertise through a deep understanding of the issues related to organisational context and leadership built through their research practice (Okoli and Pawlowski, 2004). Hence, only Academics holding a Doctoral degree and operating within the organisational leadership or related domains were included. In the selection, it was assumed that Academics with more than 15 years of teaching, consulting or leadership experience fulfil the industry diversity, functional spread and multi-organisation criteria through their engagement with different leaders in their research and teaching. The geographical spread criterion was pursued by inviting Academics from different parts of the world. The actual composition of the panels is reported in the results chapter.

### *9.2.3 Ethical approval*

Prior to any data collection ethical approval in accordance with the Henley DBA Handbook was obtained. See appendix E, Round 1 questionnaire and F, Round 2 questionnaire for the introductions and informed consent statements. The same was applied for the pilot.

## **9.3 Analysing data**

The quantitative data were analysed using Mesitydel, SPSS and Microsoft Excel. The independent variable was the expert panel, which is nominal data in three states: a) Leaders, b) HR experts, c) Academics. The dependent variable was the agreement rating, which is ordinal data and appeared in five states: one state for each number on the five-point Likert-type scale. A five-point Likert scale (Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree) was chosen following the practice in other Delphi studies (von der Gracht, 2012) and the recommendations from Maxime Petit Jean, PhD, at Mesitydel, who reported higher response rates when using the five-point rather than a seven-point scale. Ordinal data suggest the use of non-parametric statistics (Hair *et al.*, 2016). The central tendency was measured using mode and median (von der Gracht, 2012). Diamond *et al.* (2014) reviewed 100 Delphi studies and found that consensus should be defined; that the target for consensus should be set a priori; and, that it is a widespread practice to stop after a predetermined number of rounds or before if reaching consensus.

Following von der Gracht (2012) and Diamond et al. (2014) consensus in this study was defined and targeted as 70% in the top two or bottom two measures on the five-point Likert scale, with an Interquartile range of 1,0 or less. The study was stopped after the second round because of the agreement levels reached. The answer “Don’t know” was included and treated as a missing answer (Krosnick and Presser, 2010). The hypotheses reaching consensus (Strongly agree + Agree of valid Responses >0.7 and IQR <= 1.0) in round one was not reassessed in round 2. All hypothesis displaying dissensus in a panel in round 1 were reassessed in the panel in round 2. The hypotheses that were reassessed in round 2 were supplemented with input from a thematic analysis of the round one comments to inform the panellist on arguments provided by other experts. When a summary was included the references to panellists (e.g. A123; H10; L56) displayed in the results section were not displayed to the panellists. In all, 68 hypotheses related to 29 contextual factors were subjected to assessment. The 68 hypotheses concerned causal effects or interventions related to each factor, and six causal effects were hypothesised, as summarised in table 40. The hypotheses apply for the different factors as warranted by the theoretical framework.

**Table 40. Consensus hypotheses**

Hypotheses
H <sub>a</sub> : The contextual factor has causal powers to influence the choice of leadership behaviour (Strongly agree + Agree >70%; IQR <=1.0)
H <sub>b</sub> : The contextual factor has causal powers to help or hinder either leadership or work performance (Strongly agree + Agree >70%; IQR <=1.0)
H <sub>c</sub> : A leader can promote an organisational intention by influencing the relevant contextual factors that are possible to change within their leadership context (Strongly agree + Agree >70%; IQR <=1.0)
H <sub>d</sub> : The contextual factor can be strengthened through leadership interventions (Strongly agree + Agree >70%; IQR <=1.0)
H <sub>e</sub> : A leader can increase or decrease the contextual factor in their leadership context within the limitations given by the organisational and external context (Strongly agree + Agree >70%; IQR <=1.0)
H <sub>f</sub> : A leader can change the contextual factor in their leadership context within the limitations given by the organisational and external context (Strongly agree + Agree >70%; IQR <=1.0)

Source: Theoretical framework

The differences in distribution between the three panels was tested using the Kruskal-Wallis test, and differences subsequently investigated using the Mann-Whitney U test to compare panels pairwise (Gliddon, 2006; Pallant, 2016). The between panel comparison serves the purpose of investigating the usability of the framework for all three target groups, researchers, leaders, and HR. It was hypothesised that the panels would agree in their assessments of H<sub>a</sub>-H<sub>r</sub>. See table 41.

**Table 41. Between panel agreement hypothesis**

Hypotheses
H <sub>g</sub> : The panels will agree to consensus with similar distributions (H >=.05; p:.05)

Source: Gliddon (2006) and Pallant (2016).

A thematic analysis of the comments supplemented the quantitative analysis, following a template analysis methodology (King, 2018; King, 2004). NVIVO was used for the coding of comments left on each contextual factor in conjunction with coding the comments left on other factors relevant to the factor. The coding applied the theoretical framework as the coding template with each active part of the hypothesis, for example: 'helping'; 'hindering'; or 'influence the choice' was coded and consolidated into thematic qualitative findings. The coding was supplemented with emerging codes, see appendix G for the codebook. Moreover, the panellists' comments were analysed to confirm or contest each active part included in each factor definition, for example, as underlined here for the factor, Risk Intensity: The presence of threat or error potential; how bad the consequences would be; and, how likely it is to happen, ranging from high-risk to low-risk context. A hypothesis was considered confirmed when the quantitative criteria were met (Strongly agree + Agree >70%; IQR <=1.0) in all three panels, and the thematic analysis confirmed each of the active parts included in the hypothesis and the definition. Besides, the data was analysed to investigate confirmation of the propositions underpinning the conceptual framework, see table 42 on the following page.

**Table 42. Propositions about the leadership context theory**

<b>Propositions</b>
P1: Organisational intentions and desired outcomes are vital to understanding the leadership context.
P2: Causal powers warrant the inclusion of contextual factors.
P3: Context can help or hinder the agency.
P4: Agency can influence the malleable context.
P5: Agents can choose behaviour that mitigates the effects of contextual factors.
P6: Leadership context is layered in five strata.
P7: Attenuating and intensifying effects create a balanced tension system.
P8: Climate strength comprise expectation-, enactment-, alignment- and agreement-based strength.

Source: Conceptual framework

# Chapter Ten

## 10. Research results

In this chapter, the panellists; the pilot study results; and the results from the two survey rounds are presented in chronological order. The methodology outlined in the previous chapter was followed with no significant variations during the study.

### *10.1 Participants*

Given the criteria for selecting experts described in the methodology section, it was decided to use LinkedIn.com as the platform for identifying and selecting experts, because the professional online network offers the necessary rich information. Hence, in December 2018, this Author started expanding an already extensive network within all three categories. Therefore, in April 2020, this Author's network comprising 6,202 contacts was used as the basis for identifying and inviting experts. Firstly, the potential participants for all three panels were identified and invited to participate with a LinkedIn invitation, including an introduction video. Invitees were asked to submit a consent to join by writing back with their e-mail address. See appendix H for the LinkedIn invitation, and watch the introduction video (link and transcription). In both rounds, the survey was kept open for one month. Panellists received their link as soon as they accepted participation during round 1. In round two, the links were issued along with invitations. During both rounds, several rounds of personalised communication; following up on invitations and survey links via LinkedIn, mail, and phone; resulted in the response rates displayed in table 43.

**Table 43.**  
**Invitees,**  
**response rate**

Round	Leaders				HR				Academics			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Invited	156	100%	47	100%	161	100%	41	100%	179	100%	31	100%
Accepted, received link	73	47%	47	100%	65	40%	41	100%	48	27%	31	100%
Not answered the survey	22	14%	4	9%	18	11%	4	10%	13	7%	2	6%
Answered less than 33% (Excluded)	3	2%	-	-	6	4%	-	-	4	2%	-	-
Answered 33-95% (Included)	-	-	-	-	-	-	-	-	1	1%	-	-
Answered above 95% (Included)	47	30%	43	91%	41	25%	37	90%	31	17%	29	94%

Source: Invitation list and Mesydel.

There is an overrepresentation of males across all panels, also reflecting an overrepresentation in the population of invitees. See table 44.

**Table 44.**  
**Panellists,**  
**Gender**

Round	Leaders				HR				Academics			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	44	94%	42	98%	18	44%	17	46%	23	74%	21	72%
Female	3	6%	1	2%	23	56%	20	54%	8	26%	8	28%

Source: LinkedIn

There is a high educational level across the expert panels warranting their expert status, see the methodology section and table 45 below.

**Table 45.**  
**Panellists,**  
**Education level**

Round	Leaders				HR				Academics			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Dr. or PhD	3	6%	3	7%	7	17%	6	16%	31	100%	29	100%
Master	38	81%	34	79%	22	54%	20	54%	0	-	0	-
Below	6	13%	6	14%	12	29%	11	30%	0	-	0	-

Source: LinkedIn



The diversity of the panels increases the likelihood that the developed framework holds across multiple contexts (Okoli and Pawlowski, 2004). With 25 different nationalities; located in 26 different countries; with experience from 13 of the world's regions; spanning experience across 13 groups of different functional experience; and representing experience from 64 different industries the participating panellists in the three panels displayed a high diversity. Such rich diversity creates a heterogeneity which supports an appropriate theory validation mechanism (Okoli and Pawlowski, 2004). See appendix I, expert details, for the full tables with distributions across the panels and rounds. See tables 46-49 with summarised information below.

Table 46. Panellists, Nationality, Location	Nationality			Current location		
	LEA	HR	ACA	LEA	HR	ACA
<b>Round 1</b>	<b>n</b>	<b>n</b>	<b>n</b>	<b>N</b>	<b>n</b>	<b>n</b>
Australia	2	1	0	2	1	1
Brazil	2	0	0	1	0	0
Canada	2	2	2	3	2	2
China	-	-	-	2	0	0
Denmark	19	15	0	15	13	0
Finland	1	2	0	1	2	0
France	1	1	0	0	2	0
Germany	3	1	1	5	1	0
India	0	1	1	0	1	0
Ireland	1	0	0	2	0	0
Italy	0	1	0	-	-	-
Malaysia	-	-	-	1	0	0
Mexico	1	0	1	1	0	1
Morocco	0	0	1	0	0	1
Netherlands	3	1	2	2	1	2
Norway	2	1	1	2	1	1
Poland	0	2	0	0	2	0
Portugal	-	-	-	1	0	0
Romania	1	0	0	-	-	-
Russian Federation	-	-	-	1	0	0
Singapore	-	-	-	1	0	1
Slovenia	1	0	0	1	0	0
South Africa	2	1	0	2	1	0
Spain	1	1	0	0	1	0
Sweden	2	2	0	1	2	0
Switzerland	0	0	1	-	-	-
Turkey	1	0	0	-	-	-
United Arab Emirates	0	1	0	0	1	1
United Kingdom	0	3	5	1	5	6
United States of America	2	5	16	2	5	15

Source: LinkedIn. Only represented countries displayed. List adapted from:  
<https://unstats.un.org/unsd/methodology/m49/overview/>, accessed 18 May 2020

	<b>LEA</b>	<b>HR</b>	<b>ACA</b>
<b>Round 1</b>	<b>n</b>	<b>n</b>	<b>N</b>
Australia and New Zealand	3	2	2
Eastern Asia	3	0	1
Eastern Europe	3	2	1
Latin America and the Caribbean	4	0	1
Northern Africa	0	0	1
Northern America	7	10	21
Northern Europe	28	26	9
Middle East	3	1	1
South-eastern Asia	5	2	1
Southern Asia	3	1	2
Southern Europe	6	2	2
Sub-Saharan Africa	2	1	0
Western Europe	11	7	9

Source: LinkedIn. Job-related responsibilities in the region. % of panellist displaying the experience. Region definitions adopted from: <https://unstats.un.org/unsd/methodology/m49/overview/>, accessed 18 May 2020

The nationality, location distribution and regional experience in all panels indicate an overrepresentation of Western leadership thinking. However, this is to some extent counterbalanced by the regional experience, especially in the Leader Panel. A Danish overrepresentation in the Leader and HR Panels reflects this Author's demographic placement. The Northern American overrepresentation in the Academic Panel relates to an overrepresentation in this Author's LinkedIn network. From a cross-cultural and demographic viewpoint, the Western overrepresentation could impair generalisation outside the Western leadership thinking hemisphere. See tables 46-47 above.

**Table 48. Panellists, Functional experience**

	LEA	HR
<b>Round 1</b>		
	<b>n</b>	<b>n</b>
Administration, Business Support, Planning	7	2
Bus. Dev., Strategy, Transformation, Optimization	18	5
Customer support and service, After sales service	2	3
Advisor, Consulting, Head-hunter, Writer/Author	6	17
Finance, Accounting, Investment	6	0
General Management, Managing Director	22	8
HR, Legal, PR, Comm., Relations, Corp. Affairs, HSE	5	41
IT	4	1
Officer in uniformed services	7	4
Operations, Supply chain, Logistics, MRO	17	1
Procurement, Contracting, Product Management	10	0
R&D, Engineering, Technology, Quality Management	9	0
Sales and Marketing, Commercial	19	1

Source: LinkedIn. Functions comprised from LinkedIn job categories. % of panellists who displays to hold or have held a job within the function. Academics not included, see methodology section.

A relatively strong representation across different functions warrants the likelihood that the framework could be made applicable across functions. See table 48.

**Table 49. Panellists, Industry experience**

	LEA	HR		LEA	HR
Round 1					
	n	n		n	n
Accounting	0	1	Internet	0	1
Airlines/Aviation	1	3	Investment Management	0	1
Automotive	3	2	Law Enforcement	0	1
Aviation and Aerospace	0	1	Logistics and Supply Chain	1	5
Banking	2	4	Machinery	2	1
Biotechnology	2	1	Management Consulting	6	13
Building Materials	2	1	Maritime	3	1
Chemicals	1	1	Marketing and Advertising	1	1
Computer Software	2	1	Mechanical / Industrial Engineering	6	12
Consumer Electronics	0	3	Media Production	1	2
Consumer Goods	3	4	Medical Devices	2	2
Dairy	0	2	Military	6	3
Education Management	1	2	Mining and Metals	1	0
Electrical/Electronic Manufacturing	5	3	Non-Profit Org. Management	1	0
Entertainment	1	0	Oil and Energy	3	4
Environmental Services	1	0	Outsourcing/Offshoring	0	1
Executive Office	0	1	Package/Freight Delivery	0	1
Facilities Services	5	10	Paper and Forest Products	1	0
Farming	0	2	Pharmaceuticals	0	3
Financial Services	2	2	Plastics	0	1
Food and Beverages	4	3	Political Organization	0	1
Food Production	2	2	Professional Training and Coaching	1	3
Furniture	1	0	Public Safety	0	1
Government Administration	2	1	Renewables and Environment	2	3
Health, Wellness and Fitness	1	2	Retail	3	4
Hospital and Health Care	1	4	Staffing and Recruiting	0	3
Hospitality	0	2	Supermarkets	1	1
Human Resources	0	3	Telecommunications	1	2
Information Services	0	2	Tobacco	1	2
Information Technology and Services	8	4	Transportation/Trucking/Railroad	3	0
Insurance	0	3	Wholesale	1	1
International Trade and Development	0	2	Wireless	1	0

Source: LinkedIn. Industry categorization of the companies the panellist is or have been employed in. List source: <https://developer.linkedin.com/docs/reference/industry-codes>, accessed 18 May 2020. % of panellists who displays to hold or have held a job within the industry. Academics not included, see methodology section.

Likewise, high diversity in the industry experience suggests a similar likelihood for the applicability across industries. See table 49. There is an underrepresentation of NGO, public and government experience in the Leader and HR Panels skewing the expertise towards business for profit. However, the Academic Panel is assumed to hold public sector insight as leaders and employees in the higher education sector; and through dealing with such targets groups in the educational setting. See appendix I, expert details for a full list of panellists, titles, organisation and education institution affiliation.

## 10.2 Pilot study

The pilot study ran during June 2020 with ten respondents filling in the survey followed by a 45 min semi-structured cognitive interview. In addition to answering the survey during the pilot, the experts were asked to comment on any difficulties during the survey in the open comment fields placed after the scale questions on each factor. These comments and the notes from the follow-up interviews were analysed using NVIVO, and the adjustments decided are summarised in table 50 on the following pages. See appendix E for the adjusted survey.

**Table 50. Summary, adjustments from the pilot**

Input from the pilot study	Adjustments or response
<p><b>Survey setup</b></p> <ol style="list-style-type: none"> <li>1. The user interface received good feedback.</li> <li>2. The flow and logic in the survey received good feedback.</li> <li>3. The survey used videos for introducing the survey and the categories. The videos opened in the same window, so it was necessary to click back in the browser to continue the survey which worried respondents.</li> <li>4. The length of the survey corresponded the expectations expressed in the invitation video; it took the respondents between 45 and 75 minutes to answer including watching the videos (total 17 minutes) and commenting on the survey build-up underway.</li> <li>5. Some respondents were in doubt how to navigate to previous pages in the survey.</li> <li>6. Some respondents noted that there are 30 pages displayed at the bottom of the survey. They reflected on if this could make some respondents opt-out on the first page. After answering the first factor, this consideration disappeared as answering one page went fast.</li> <li>7. In two instances, the respondents provided Gmail-addresses, and the mails did not go through from the system.</li> </ol>	<p><b>Response</b></p> <ol style="list-style-type: none"> <li>1. The survey was kept in Mesydel.</li> <li>2. The flow and logic remained unchanged.</li> <li>3. The video links were changed to open in a new window.</li> <li>4. No content was removed due to time constraints.</li> <li>5. An instruction text on how to navigate between pages was added.</li> <li>6. A remark about there being one page per factor was added to the introduction video.</li> <li>7. A work-around was found and applied for Gmail-recipients.</li> </ol>

<p><b>Videos</b></p> <ol style="list-style-type: none"> <li>1. All respondents unsolicited reacted very positively to the invitation and introduction videos.</li> <li>2. It was noted that in the introduction video, the purpose of the survey is to investigate 'your agreement', which could be considered leading the respondent.</li> <li>3. Some noted the risk of leading the respondent by having a video with examples introducing each category.</li> <li>4. Three respondents noted a positive effect of being stopped and sensitised to the category by the category intro videos. It was experienced as conducive to refraining from running on 'auto-pilot'.</li> </ol>	<p><b>Response</b></p> <ol style="list-style-type: none"> <li>1. Using a video for the invitation and for the introduction of the survey was retained.</li> <li>2. The introduction video was changed to introduce the purpose of the survey as investigating 'the level of agreement or disagreement' to avoid leading respondents.</li> <li>3. The videos introducing each category of factors with examples of each factor were removed to avoid infusing confirmation bias. In all, 10 min video was removed.</li> <li>4. To maintain that the respondent slows down and sensitises to the category, the colour of the introduction text was changed to stand out.</li> </ol>
<p><b>Introduction texts</b></p> <ol style="list-style-type: none"> <li>1. Four respondents answered the survey from the subjective perspective of their current position and organisation. These respondents reported their information retrieval and decision process to concern <i>"does the factor influence... in my current situation."</i> Six respondents answered from the sum of their accumulated experience. They reported their information retrieval and decision process to concern <i>"can the factor influence.... in some settings or situations"</i>, i.e. as an expert, which was the survey's intention.</li> </ol>	<p><b>Response</b></p> <ol style="list-style-type: none"> <li>1. To ensure that respondents assume an expert's perspective rather than a narrow perspective from their current position; the introduction video was supplemented with an explanation hereof. Furthermore, as this could threaten the validity of the Delphi method, an instruction and a check question were introduced on the first page:</li> </ol> <p><b>Explanation added: <b>Headline: The purpose of the survey and your focus when answering the survey. Text:</b></b> The study investigates how context impacts on leadership and employee work performance. However, that a contextual factor can have an effect does not mean that the contextual factor always exercises this influence because other factors might keep it in check. The study asks about the influence on either leadership or employee work performance behaviour because an influence on either or both, makes it relevant to include the factor in a framework for leadership context. Therefore, it is important that you answer with your best judgement about how the contextual factors typically impact on leadership and employee work performance; and not from a narrow perspective of what is going on right now in your current position or organisation.</p> <p><b>Check question:</b> <i>"Kindly confirm that you will answer this survey from the sum of your accumulated experience, insight and knowledge."</i></p>

<p>2. The introduction text for the category of social factors was more elaborate than the other categories. That prompted positive reactions and suggestions to do the same for the other categories.</p>	<p>2. To ensure the framing, the introduction text for each category were adjusted to be more elaborative in line with the social factor category introduction.</p>
<p><b>Definitions – an overall remark</b></p> <p>1. On nine of the factor definitions, the pilot respondents reported having read the definition more than twice or commented on the clarity. For these, the information retrieval and the interpretation were investigated by asking the respondents to exemplify how they understood the definition and probe their suggestions and the reasoning behind.</p>	<p><b>Response</b></p> <p>1. In the table below the adjustments decided are reported. For the definitions not mentioned below no changes were deemed relevant.</p>
<p><b>Definition 1.1 – Physical distance and temporal separation</b> (the numbers refer to the question numbers in the pilot survey)</p> <p>1. Four respondents noted that the factor definition covered two different and distinct factors making it difficult to answer.</p>	<p><b>Response</b></p> <p>1. The literature reviewed was reassessed to verify the empirical support for the two factors. It was decided to focus on physical distance. The definition was reformulated, and the factor renamed to Physical distance, see the theoretical framework.</p>
<p><b>Definition 1.3 – Environmental complexity</b></p> <p>1. Four respondents found the formulation complex, e.g. it contained a double use of the word “factor”, i.e. <i>“This factor concerns the number of factors and..”</i> making it difficult to read.</p> <p>2. Two respondents noted that this concerns external complexity, while internal complexity was addressed later. They suggested renaming 1.3 and 1.8 accordingly.</p>	<p><b>Response</b></p> <p>1. To increase readability and clarity; the definition was reformulated, see the theoretical framework.</p> <p>2. The reviewed literature was consulted to investigate if Environmental complexity could be renamed ‘External complexity’ and Specialization and complexity renamed ‘Internal complexity’. This distinction was found to be warranted in the literature and was implemented. It clarifies the delineation between complexity within the leader’s area of responsibility and complexity from the outside, be that from the wider organisation or the environment outside the organisation.</p>

<p><b>Definition 1.4 – Environmental dynamism</b></p> <p>1. No respondent comments.</p>	<p><b>Response</b></p> <p>1. Because of the abovementioned renaming of environmental complexity, it was investigated if the literature similarly warranted a similar delineation of dynamism. It was found that dynamism in the reviewed literature pertains to powers stemming from the outside exercising causal powers on the leader and followers in question. Hence, the factor was renamed ‘External dynamism’ and the definition specified to concern forces influencing from the outside upon the leader’s area of responsibility.</p>
<p><b>Definition 1.6 – Centralization and Empowerment</b></p> <p>1. Three respondents commented that the inclusion of ‘empowerment’ in the factor title was unnecessary and confusing. In addition, they noted that the readability of the definition could be improved.</p>	<p><b>Response</b></p> <p>1. To increase readability and clarity; the definition was reformulated, and ‘empowerment’ removed from the headline, see the theoretical framework.</p>
<p><b>Definition 1.7 – Formalization</b></p> <p>1. One respondent interpreted the definition as ‘corporate standards’ rather than the level of documenting anything which needs to be formalised; no matter if the decision to do so is taken locally or centrally.</p>	<p><b>Response</b></p> <p>1. To secure clarity, the literature was revisited, and the definition was reformulated, see the theoretical framework.</p>
<p><b>Definition 1.8 – Specialization and complexity</b></p> <p>1. Five respondents commented on the headline covering two related, yet distinct factors. In addition, the questions yielded a higher spread in the answers covering all answers besides “strongly disagree” on the four scale questions.</p> <p>2. As noted under 1.3, two respondents suggested renaming this factor ‘internal complexity’.</p>	<p><b>Response</b></p> <p>1. To increase readability and clarity; the definition was reformulated, see the theoretical framework.</p> <p>2. Revisiting the literature supported focusing the factor name on internal complexity, and it was renamed.</p>
<p><b>Definition 1.11 – The overall definition of Climate</b></p> <p>1. One respondent noted that the category was named ‘Social factors’, while all factors included were named ‘Climate’ potentially leading to unnecessary confusion.</p>	<p><b>Response</b></p> <p>1. The category was renamed ‘Climate factors’ throughout the survey.</p>



<p>2. Two respondents suggested that climate was renamed 'organisational environment' as that was their interpretation. The native English speakers reported no trouble understanding the term 'climate'.</p> <p>3. The introduction of the climate term at the beginning of the category was pointed out as helpful by five respondents. All five suggested small specifications of the text to enhance clarity.</p>	<p>2. The term 'climate' was kept as the comprehension of what it pertains to did not seem to disturb even though some respondents would translate it to 'organisational environment' in their interpretation.</p> <p>3. The overall definition of climate was updated for clarity.</p>
<p><b>Definition 1.15 – Goal-path clarity and stretch</b></p> <p>1. Two respondents noted that they did not understand the word 'honing' in the formulation 'honing our professional mastery'.</p>	<p><b>Response</b></p> <p>1. 'Honing' was exchanged with 'continuously improving' to improve understanding.</p>
<p><b>Definition 1.17 – The climate for trust, tolerance, and collaboration</b></p> <p>1. Three respondents were confused by the inclusion of three components in the headline. They all interpreted the word 'tolerance' as 'inclusion of minority groups in the workplace'. They referred to the attention to diversity and inclusion currently gaining support in many companies and in the public debate.</p>	<p><b>Response</b></p> <p>1. The literature was revisited to confirm that trust and tolerance are antecedents to collaboration; hence, the factor was renamed 'Climate for collaboration'. Furthermore, the literature confirmed that tolerance pertains to 'openness to diverse thinking' in this respect, and the definition was reformulated to specify this focus.</p>
<p><b>Definition 1.20 – following and sharing leadership</b></p> <p>1. Two respondents pointed out that the definition implies that shared leadership needs to be present for them to agree to the definition. They found that to be a problem because a follower can be empowered to take certain actions without that it necessarily includes the mandate to exercise leadership towards others. The interview indicated that what disturbed their comprehension of the definition was the word 'leadership' and the formulation, which indicated a necessary presence of shared leadership.</p>	<p><b>Response</b></p> <p>1. The literature supports considering shared leadership similar to full-fledged empowerment, as accounted for in the development of the theoretical framework. To avoid the confusion; the factor was renamed to 'climate for following'. Also, the definition was reformulated to clarify the intended focus on followership, including the extension of the definition discussed in the section on the climate for following. See the theoretical framework.</p>
<p><b>Questions – overall remarks</b></p> <p>1. During the cognitive interviews, all respondents were asked to comment on their comprehension and information retrieval for the keywords which are reused throughout the survey in the different questions.</p>	<p><b>Response</b></p> <p>1. In the table below the feedback and adjustments are grouped under the keywords and in some instances, a specific question.</p>

<p><b>Questions – construction</b></p> <p>1. One respondent proficient in survey design remarked that the questions asked “<i>To which extent do you agree..</i>” and the five-point scale both grades the response. This leaves an opportunity to reduce the questions to statements shortening the text and increasing readability.</p>	<p><b>Response</b></p> <p>1. Other Delphi studies have applied statements as suggested ( e.g. Grisham, 2006; Raine, 2006). The formulation “<i>To which extent do you agree...</i>” was removed from the questions and the format changed to statements. Furthermore, the introduction video and the introduction text were amended to explain that the survey investigates the level of agreement or disagreement to a range of statements concerning factors in the leadership context. The change from questions to statements is implemented along with the below adjustments.</p>
<p><b>Question keyword – "guide."</b></p> <ul style="list-style-type: none"> <li>Seven respondents expressed difficulties interpreting the question and pointed to their understanding of ‘guide’ as the struggle. The word ‘guide’ gave several different interpretations; 1) that the factor influences me as a leader, 2) that it is important that I as a leader guide people in regard to this factor, 3) that I should choose certain behaviours if the factor is exercising influence; and other leader behaviour if there is no influence from the factor. The latter was the intended interpretation.</li> </ul>	<p><b>Response</b></p> <p>1. The question was changed to reflect the warranted hypothesis, which is that a leader should choose behaviour within her leader behaviour range to match the contextual demands. The hypothesis was reformulated to: “<i>Has causal powers to influence the choice of leadership behaviour.</i>”</p>
<p><b>Question keyword – "mitigate."</b></p> <p>1. Three respondents commented on difficulties understanding the difference between ‘guiding’ and ‘mitigating’. When interviewed on their information retrieval, their reflections were that in both cases the leader would be assessing the situation and then choose certain behaviours which she or he would not have chosen if the contextual factor was not present with the power to influence; manifested or not.</p>	<p><b>Response</b></p> <p>1. The literature warranting the hypothesis that leadership can mitigate the hindering causal effects of certain contextual factors (physical distance; risk intensity; external complexity; external dynamism; internal complexity) was investigated again. For these factors, the literature supported that mitigation was the aim of the leadership interventions studied; and that these interventions actual resemble or fully match the deliberate choice of behaviours behind the hypothesis of ‘choosing leadership behaviours’ discussed above. For the factors in the intrinsic stratum (value composition and diversity; personality composition and diversity; expertise composition and diversity) mitigation was hypothesised due to the empirical support to that a leader could intervene to mitigate hindering causal effects by regulating behaviour, changing the composition of the workforce, or developing expertise. In line with the above adjustments the formulation of the hypothesis was updated to focus on the leader’s intervention rather than the mitigative effects of such actions.</p>

<p><b>Question key phrase – "leadership effort."</b></p> <p>1. Two respondents suggested that the term 'leadership effort' should be replaced with 'leadership behaviour' as they wondered if 'effort' meant how many hours the leader put in or the behaviour chosen.</p>	<p><b>Response</b></p> <p>1. 'Leadership effort' was replaced with 'leadership behaviour' to reflect better the background for the hypothesis, i.e. the contingency leadership assumption, which is usually related to a leadership behaviour range.</p>
<p><b>Question key phrase – "leadership and/or employee work performance behaviour."</b></p> <p>1. Four respondents reported considerations about the inclusion of both leadership and work performance in the question. The probing revealed considerations about if the factor could be influencing only one of them, and if they should agree if that were the case. None of the four respondents could recall any explanations of why both were included.</p>	<p><b>Response</b></p> <p>1. To avoid bringing respondents into a dilemma when answering whether a contextual factor's helping or hindering effects can be directed towards leadership <u>and/or</u> employee work performance the research purpose of uncovering consensus or dissensus as to which factors should be included in the leadership context, and to their causal powers was clarified in the introduction video. Moreover, the statement was reformulated to "...can help or hinder <u>either</u> leadership or employee work performance behaviour?"</p>
<p><b>Question key phrase – "help or hinder."</b></p> <p>1. Two respondents noted that having the formulation 'help or hinder' could lead to confusion. However, probing revealed that they could give examples on both, so the confusion pertains to the use of 'or.'</p> <p>1. One respondent remarked that the question was absent in relation to hierarchical level, but that hierarchical position can help or hinder leadership, suggesting the inclusion of this hypothesis to be tested.</p>	<p><b>Response</b></p> <p>1. To avoid the potential dilemma caused by 'or' the inclusion criteria for which factors should be included in a framework for leadership context, i.e. that they hold causal powers to <u>either</u> help or hinder is clarified 1) in the introduction video, and 2) in the introduction text to each section.</p> <p>2. The reviewed literature was revisited, and confirmation that positional placement can help, or hinder leadership was identified. The theoretical framework was adjusted to include this hypothesis.</p>
<p><b>Question key phrase – "influence the emergence or reproduction."</b></p> <p>1. This phrase is used only for the climate factors. Two respondents reported difficulties with the phrase, and the probing revealed that the doubt was related to both 'influence' and 'emergence'.</p>	<p><b>Response</b></p> <p>1. The hypothesis warranted in the literature is that a climate can be strengthened through leadership interventions to promote the strategic focus of the climate, see the section on climate. Hence, the statement was reformulated to: "The climate for [e.g. collaboration] can be strengthened through leadership interventions."</p>

<p><b>Question key phrase – "influence."</b></p> <p>1. Due to the above feedback on the climate questions, and because one respondent had commented on 'influence' related to the questions in the climate factors; applying 'influence' in relation to the systemic factors was probed in the remaining five interviews. The probing indicated an agreement among these five respondents to an interpretation of 'influence' as 'increase or decrease through leadership interventions'.</p>	<p><b>Response</b></p> <p>1. To clarify the statement was reformulated to "A leader can increase or decrease [e.g. complexity; formalization] in their leadership context within the limitations given by the larger organisation."</p>
<p><b>Question key phrase – "leadership can shape elements in the context addressed earlier in the survey."</b></p> <p>1. This phrase was used under the three intentionality factors. Three respondents found this question difficult because they struggled to remember the elements addressed earlier and hesitated to answer. One respondent perceived the questions as "can all the previous elements be shaped by leadership." Moreover, the term "shape" was considered by four respondents, and they interpreted it as "influence or change."</p>	<p><b>Response</b></p> <p>1. The hypothesis pertains to the finding in the literature that a leader should deliberately shape their leadership context to promote the intention, which is pursued. See the discussion in the intentionality section.</p> <p>To avoid the stopping factor of struggling to recall the question was reformulated.</p> <p>The new statement: "A leader can promote [exploitation and task performance] by influencing the relevant contextual factors that are possible to change within their leadership context."</p>

Source: Pilot study.

### 10.3 The Delphi study results

In the following sections, the results of the Delphi study are reported. The reporting begins with findings related to the eight propositions from the conceptual framework. In continuation, the Delphi results for the hypotheses from the theoretical framework are reported. The panellists are referenced with their unique ID, for example, H4 for an HR panellist, L29 for a Leader panellist, or A121 for an expert in the Academic Panel.

#### 10.3.1 Framework propositions

The Delphi results confirming or contesting the propositions developed through the literature review are reported in this section.

*10.3.1.1 P<sub>1</sub>: Organisational intentions and desired outcomes are vital to understanding the leadership context.*

**Proposition #1** concerns that a leader should be influenced in the choice of leader behaviour by the organisational intentions and desired outcomes. Moreover, to do so, the leader should understand the desired outcomes and the organisation's functioning resulting in *Efficiency and Stability, Adaptability and Innovation* or improvement of the *Human Capital and Relations*.

**The quantitative Delphi results** confirmed the proposition with consensus across all panels on the three choice-hypotheses concerning intentionality. Specifically, there was agreement that pursuing exploitation and task performance (87-90% agreed or strongly agreed); pursuing exploration and adaptive performance (93-97%); and, pursuing human capital quality and contextual performance (86-90%) can influence the choice of leadership behaviour.

**The analysis of Panellist comments** further warrants the proposition. For example, H98 remarks: *"Leaders have to be receptive to the organisational intentions and to find the best way to align them with the existing team's goals"* and A127 comments that: *"encouraging exploration and adaptive performance requires different leadership behaviours to exploitative performance."* The above results are elaborated in the later sections reporting on the hypotheses pertaining to the intentionality stratum.

*10.3.1.2 P<sub>2</sub>: Causal powers warrant the inclusion of contextual factors.*

**Proposition #2** concerns that only contextual factors holding causal powers to influence leadership or work performance should be included in the leadership context.

**The Delphi results** confirmed the proposition. The hypothesis that a contextual factor holds causal powers to help or hinder leadership and work performance was confirmed for 25 contextual factors across the determinant, systemic, social and intrinsic strata. Further cementing the proposition was a rejection of the hypothesis that the climate for sustainability can help or hinder leadership and work performance. The comments explaining the rejection concerned that, while sustainability is important, the direct helping and hindering effects on leadership or work performance are difficult to identify (H10; H104; H144; H15; H21; H41; L155; L20; L43; L51; L80; A79; A84). The specific results for the helping-hindering are elaborated in the later sections in this chapter.

### 10.3.1.3 *P<sub>3</sub>: Context can help or hinder agency.*

**Proposition #3** concerns that contextual factors hold the causal powers to exercise a helping or a hindering effect on agency.

**The Delphi results** confirmed the proposition regarding the helping and hindering effects as reported on proposition #2. There are multiple inputs on the helping and hindering effects, for example, L58 states that: *"Agreed rules/standard operation procedures help set the limits/boundaries for how to do (deliver) and what to expect (receive)."* The helping and hindering effects are reported related to each hypothesis below and in appendix J if referred under the hypothesis.

### 10.3.1.4 *P<sub>4</sub>: Agency can influence the malleable context.*

**Proposition #4** concerns that leadership agency can increase or decrease some systemic contextual factors; strengthen the emergence and reproduction of malleable social factors and change staff composition in the leadership context. Conversely, also that some contextual factors are immalleable through leadership agency.

**The Delphi results** confirmed that some factors are malleable as consensus that leadership interventions can increase or decrease centralisation (79-85% agreed or strongly agreed); Formalization (76-86%); Internal complexity (78-86%); Interdependence (78-93%) and Resource constraints (76-84%) was achieved across all panels. The three panels reached consensus (83-100%) that each of the thirteen climates included in the study can be strengthened through leadership. Finally, there was consensus in all panels that changing staff composition is a viable path to shape the leadership context to the extent that a leader can hire, fire or rotate people. Further input on the increase-decrease, strengthen-, and change composition hypotheses are reported under each factor.

**The analysis of Panellist comments** warrants that some contextual factors are immalleable. As examples, A2 remarked: *"Physical distance can be mitigated by the leader based on his / her leadership actions"* implying that the distance itself is immalleable. H35 commented that: *"There is no control over external complexity."* L36 elaborated about risk intensity: *"When we are operating in a high-risk environment, i.e. a mistake could deliver catastrophic consequences for our company, leadership context does change"* confirming that the acceptance of some risks, which are immalleable, is necessary to deliver on the tasks. Furthermore, as a final example, H123 commented on external dynamism stating that: *"The leader should be able to recognise the impact these external changes have if any and manage the team in explaining the possible impact on their work."*

*10.3.1.5 P<sub>5</sub>: Agents can choose behaviour that mitigate the effects of contextual factors.*

**Proposition #5** concerns an agency part, that leadership holds power to mitigate the negative effect of some contextual factors by choosing the most appropriate leadership behaviour from their leader behaviour range. Also, it concerns a ‘between contextual factors’ effect, namely that leadership can mitigate negative contextual effects from one factor indirectly by intervening to influence other malleable contextual factors.

**The Delphi results** confirmed the agency part of the proposition. That is, the hypothesis that a contextual factor holds power to influence the choice of leadership behaviour was confirmed for 16 contextual factors across the intentionality, determinant, systemic and intrinsic strata. An example of the mitigative effect of choosing certain leadership behaviour in response to causal effects from a contextual factor can be taken from the comments about External complexity. Here three panellists commented that the leader should strike a balance between spending extra energy involving people and being directive and decisive to create clarity to mitigate the impact of complexity (H68; H142; L105). The second part of the proposition concerning mitigation by shaping other contextual factors is confirmed above under proposition #4 and below under proposition #7, which confirms that intensifying or attenuating powers exists between factors.

*10.3.1.6 P<sub>6</sub>: Leadership context is layered in five strata.*

**Proposition #6** concerns the existence of five strata in the conceptual framework for leadership context ordering the contextual factors into groups with similar causal mechanisms. That is, a layer of organisational intentionality; determinant structures; systemic structures; social structures; and intrinsic structures.

**The quantitative Delphi results** partly confirmed the proposition. The high consensus levels about the influence of *organisational intentions* on the choice of leadership behaviour across panels (86-97% agreed or strongly agreed) indicate the relevance of the grouping. The attribute placing contextual factors in the *determinant stratum* is that the factors are mostly outside a leader's control, while their effects impact the leadership context. This attribute was implicitly confirmed as reported under proposition #4 above. The factors in the *systemic stratum*, besides hierarchical level, share the attribute that they can be increased or decreased by the leader as confirmed in all three panels across the centralisation; formalisation; internal complexity; interdependence; and resource constraint factors (76-93%).

Hierarchical level was not tested to the increase-decrease hypothesis as the theoretical framework did not warrant it. In the stratum of *social structures*, the contextual factors, i.e. climates, share the attribute that they are the property of the collective confirmed by consensus to the strengthen-hypothesis across all panels on the thirteen factors included (83-100% agreed or strongly agreed). Finally, the factors in the *intrinsic stratum*; Values-, Personality- and Expertise-composition and diversity share the attribute that they are the property of the individual and always present in the leadership context. The attribute that these contextual factors are always present is only implicitly confirmed. Partly by the consensus that the factors influence the choice of leader behaviour (76-91%) and can help and hinder leadership and work performance (83-91%). Also, partly by the contesting in round 1 of the hypothesis that personality composition can be changed, which several panellists misunderstood as suggesting that personality could be changed, which they rejected. In addition to the confirmation reported above, no rebuttals to the formulations introducing the strata in the survey were identified, see appendix E, round 1 questionnaire.

#### *10.3.1.7 P<sub>7</sub>: Attenuating and intensifying effects create a balanced tension system.*

**Proposition #7** concerns that contextual factors in the leadership context hold attenuating and intensifying powers that can affect other contextual factors' causal effects.

**The template analysis of comments** confirmed the proposition. As examples, the analysis of comments showed that the higher the internal complexity, the more critical developing a strong climate for collaboration and for empowerment becomes to attenuate the effects of the high internal complexity (H116; L109; A31; L125; L105). In addition, the strength of the goal-path climate can attenuate some effects from internal complexity by supplying clear direction and priorities for the members to navigate and coordinate from (A124; H68; L1). Moreover, the internal complexity interacts with interdependence, where boundary-spanning complexity can intensify interdependence while resource- or other interdependence can intensify complexity (L57; L27; H144; A74; A123). Another example is that a strong climate for safety can attenuate the hindering effects from high risk intensity upon performance (A123; A2; L105). Conversely, a weak safety climate can intensify the hindering effects of risk intensity by raising anxiety levels; creating unclear risk tolerances, reckless behaviour, resulting in more errors and accidents; and making people leave (A84; A123; A127; A123; L105; L92). Further comments on 'between factor effects' are reported in appendix J, under the relevant hypotheses in the following sections.



*10.3.1.8 P<sub>8</sub>: Climate strength comprise expectation-, enactment-, alignment- and agreement-based strength.*

**Proposition #8** concerns that a climate's strength is a sum of expectation-, enactment-, alignment- and agreement-based strength. Moreover, in continuation of proposition #4, that a leader can strengthen a climate by influencing the four strength-dimensions.

**The template analysis of comments** confirmed each element in the strength concept, and these elements can be strengthened through leader interventions. The confirmations are summarised under each of the definitions for the four strength components developed in the previous chapter, see table 51.

**Table 51. Confirmation of the strength concept**

<b>Expectation-based strength</b>	
<b>Definition</b>	The perceived level of clarity of the messages expressing expectations to behaviour and practices, i.e. the clarity of priorities, rules, regulations, procedures, policies, code of conduct, and other expectations.
<b>Confirmation</b>	The comments confirmed that in most companies, there are formalised codes of conduct, policies and procedures that must be followed (A74; A68; L1; H101; H98; L139; L125; H83). In continuation that the leader can use formalisation to establish clear expectations and joint frames of references about conduct, processes, and decisions (L43; H101; L9). Also, in the cases where the leader involves a team in establishing formalised behavioural expectations and joint interpretations hereof in a previously non-formalised area (L200; L107; H53).

<b>Enactment-based strength</b>	
<b>Definition</b>	The perception of acceptable enacted behaviour and practices among members in the leadership context, including the leaders.
<b>Confirmation</b>	The panellists commented on strengthening the climate for diligence and discipline. They found that leading through clear commitments in combination with holding each other accountable to these commitments strengthens the climate, and results in increased performance (L82; A31; L109; L121). The focus can be on ensuring accountability to the 'how' of doing things, as well as being disciplined in holding each other accountable to agreed outcomes or actions, leaving the 'how' unregulated. Thus, a strong climate encompasses clarity on whether 'following protocol' or 'delivering as committed' or both is in focus (A160; A31; A96, H42, L109; H53). Another facet concerning enactment is role modelling, here related to the climate for exploitative learning, where the panellists remarked that role modelling the continuous improvement practice and mindset strengthens the climate (A96; L49; L58; L43; L82; A27; H83; H10; H116; L57; L108). Conversely, a lack of role modelling from the top and missing alignment of behaviour among the leaders weakens the climate (L43; L27; A27; A160; L125; L82).

<b>Alignment-based strength</b>	
<b>Definition</b>	The level of perceived alignment between 1) the messages expressing expectations to behaviour and practices, and 2) between expectations and enactment.
<b>Confirmation</b>	Commenting on the climate for diligence and discipline the panellists emphasised that role clarity and clear accountabilities throughout the organisation together with a climate where accountability is enforced increases the precision and speed in the organisational functioning making it 'play like an orchestra together' (L92; L109; L49; L82). Moreover, they found that an integral part of strengthening this climate, is consistent, routinised disciplined leadership follow-up, reinforcing and corrective actions – the leader must set and enact the standard (L105; L200; H98; L125; A74; A115; H83; H116; L20; L107; L57). That is, the practice where a leader applies existing formalised rules, regulations, principles or policies to align expectations; build common ground around how 'we do around here' and in continuations hereof reinforce this behaviour (L82; L105; L140; A96; H53).

<b>Agreement-based strength</b>	
<b>Definition</b>	The level of agreement among members in the leadership context regarding their perception of the expectation-, enactment-, and alignment-based strength.
<b>Confirmation</b>	The panellists remarked that for formalisation to have an effect, the leader should engage in sense-giving about how to interpret formalised documentation into common perceptions of the expected behavioural manifestation. This because the joint sense-making processes creating agreement is imperative for it to become a social regulation mechanism (L57; L9; L113; A115; A96; H123; L200). Another example is educating organisational members to understand change reactions because a common language and shared perceptions of acceptable behaviour facilitate a stronger climate for change (H83; H123; L9; L107; H59).

Source: The thematic analysis of literature and the template analysis of the Delphi study comments

Together, the propositions form an essential scaffold for the emerging framework for the leadership context. For the remainder of this chapter, the Delphi study results for each hypothesised causal effect are reported.

### 10.3.2 Factor hypothesis

The Delphi results' reporting for the hypothesised causal effects begins with an attention to differences in the distribution of answers across panels. Distribution differences were investigated after both rounds to draw attention to potential challenges to consensus across panels. Hereafter the reporting follows the structure of the theoretical model. For each stratum, the reporting first concludes on the confirmation of hypotheses in an overview table, see example below, table 52. In these tables, a hypothesis is marked as confirmed ( ✓ ) when the quantitative criteria are met, and the qualitative analysis of the panellists' comments confirm each of the active parts included in the hypothesis. These active parts are underlined in the hypotheses. Moreover, when quantitative consensus and qualitative confirmation was reached in all panels after round 1, the confirmation checkmark is followed by a "1", whereas factors included in any panel in the second round is marked by a "2".

**Table 52. Hypothesis confirmation overview, Example table**

Contextual factor	Hypothesis: The contextual factor can <u>influence the choice of leadership behaviour</u>	Hypothesis: A leader can <u>promote the intention by influencing the relevant contextual factors that are possible to change within their leadership context</u>
Here the name of the contextual factor	H <sub>x</sub> : ✓ 2	H <sub>y</sub> : ✓ 1

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

Hereafter the quantitative reporting of consensus levels for each panel is reported to see if the consensus threshold was met; that is, whether the Strongly agree and Agree scores together were above 70% in combination with an Interquartile Range of 1.00 or less. The quantitative reporting is supplemented by the qualitative analysis of comments. That is, either 1) the full summary of comments which was included to inform the panellists in round 2, or 2) excerpts from the qualitative template analysis. When relevant, additional findings from the qualitative analysis are reported in appendix J. Any comments on changing answers from round one to two were analysed and are included in the reporting under each hypothesis when contradicting the scale-answers. The remaining comments on changing answers are reported in appendix K. It was expected that answers on the agreement questions would follow the same distribution for each question in all panels. If distributions differed significantly, it raised attention to investigate differences in understanding the factor definition, the interpretation of keywords, or the judgements across panels. The Kruskal-Wallis H test revealed significant differences between panels on six hypotheses in round 1 and three of the hypotheses in round 2, see table 53.

**Table 53. Panel distribution, Kruskal-Wallis H test, rejected null hypotheses, Round 1**

Null hypothesis: The distribution of the factor is the same across the panels.	
Physical distance - choice.	.027
Climate for service - help/hinder	.009
Climate for service – strengthened	.044
Climate for sustainability - help/hinder	.031
Climate for sustainability – strengthened	.026
Intention to explore - choice	.039
Asymptotic significances are displayed. The significance level is .05	

Source: Delphi study.

The hypotheses not reaching consensus in round 1 were investigated in round 2. Hence, some hypotheses were only included in round 2 for one or two of the three panels. Therefore, after round two, the distribution comparison was run on a dataset comprising round 2 data supplemented with round 1 data for the panels and individual panelists who did not answer in round 2. See table 54.

<b>Table 54. Panel distribution, Kruskal-Wallis H test, rejected null hypotheses, Round 2</b>	
<b>Round 2</b>	
Null hypothesis: The distribution of the factor is the same across the panels.	
Hierarchical level - help/hinder	.045
Climate for sustainability - help/hinder	.016
Climate for sustainability - strengthened	.019
Asymptotic significances are displayed. The significance level is .05	

Source: Delphi study.

After both rounds, the differences were further investigated using the Mann-Whitney U test for pairwise comparison of the panel distributions. Moreover, the comments from the panellists skewing the distributions were investigated. The analysis and implications are reported under each hypothesis in the following sections. The median, mode, agreement and IQR was analysed using SPSS in conjunction with a thematic qualitative analysis of comments using NVIVO, see appendix G for the codebook. After round one, the analysis formed the basis for deciding the design of the survey round 2. In the following, tables are displayed where the factors were contested in round one; but not in the cases where consensus was reached on all parameters in all panels already in round 1. Tables with the quantitative results for all factors, round 1 and 2, are available in appendix L.

### 10.3.2.1 Organisational intentionality

In the intentionality stratum, six hypotheses were investigated and confirmed in all panels. See table 55.

**Table 55. Hypothesis confirmation overview, Intentionality stratum**

Contextual factor	Hypothesis: The contextual factor can <u>influence the choice of leadership behaviour</u>	Hypothesis: A leader can <u>promote the intention by influencing the relevant contextual factors that are possible to change within their leadership context</u>
The intention to pursue exploitation and task performance.	H <sub>1</sub> : ✓ <sup>1</sup>	H <sub>2</sub> : ✓ <sup>1</sup>
The intention to pursue exploration and adaptive performance.	H <sub>3</sub> : ✓ <sup>1</sup>	H <sub>4</sub> : ✓ <sup>1</sup>
The intention to pursue human capital quality and contextual performance.	H <sub>5</sub> : ✓ <sup>1</sup>	H <sub>6</sub> : ✓ <sup>1</sup>

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

#### 10.3.2.2 Factor: *The intention to pursue exploitation and task performance*

**Definition:** The intention to optimise and increase organisational efficiency to sustain and improve business performance. Focus on promoting task performance to maintain, refine, develop and extend the existing operation building on known competences, business models, technologies, and ways of operating.

**H<sub>1</sub>:** The intention to pursue exploitation and task performance can influence the choice of leadership behaviour.

**Round 1:** H<sub>1</sub> was confirmed (L:87%; HR:89%; Aca:90%) and not included in round 2.

**Excerpt from the qualitative analysis confirming the definition and hypothesis:**

There are three cornerstones which should guide the leader's choice of interventions to promote exploitation: standardisation; reinforcing the discipline of operating according to the standards; and a continuous improvement mindset (L4; H53; A68; A96; H98; L125).

The leader should secure attention to the business performance using metrics and rewards as a leadership platform; linking the long-term benefits for employees and company, such as staying competitive and retaining jobs, to the continuous improvement efforts asked from the organisation (A124; A68; L27). See appendix J for additional findings.

**H<sub>2</sub>:** A leader can promote exploitation and task performance by influencing the relevant contextual factors that can be changed within their leadership context.

**Round 1:** H<sub>2</sub> was confirmed (L:87%; HR:95%; Aca:83%) and not included in round 2.

***Excerpt from the qualitative analysis confirming the definition and hypothesis:***

Influencing the context to promote exploitation and task performance should be rooted in an understanding of the value drivers for the area influencing how the leader chooses to formalise and centralise decisions, allocate resources, and design processes (L4; L117; L2; L125). A strong climate for exploitative learning intensifies exploitation; and a leader should actively intervene to strengthen the climate as an integrated part of pursuing exploitation (A27; H98; L125). Formalisation can help gain efficiency as the documentation lays the foundation for continuous improvement (L4; A127; L113). The leader can also shape the context to promote exploitation by centralising expertise, resources or decisions (L2; L117; A96; H42; L4), for example with central staff functions like HR or legal; shared service centres; and, governance around certain decisions. See appendix J for additional findings.

***10.3.2.3 Factor: The intention to pursue exploration and adaptive performance***

***Definition:*** The intention to build the foundation for future business outside the current business or to disrupt, rethink and significantly change existing operation. Focus on promoting adaptive performance to explore future business platforms through innovation and experimentation; to build new business models, and leverage new competencies, technologies, and ways of working.

**H<sub>3</sub>:** The intention to pursue exploration and adaptive performance can influence the choice of leadership behaviour.

**Round 1:**  $H_3$  was confirmed (L:93%; HR:93%; Aca:97%). However, the Kruskal-Wallis H test revealed a significant difference among panels (H:.039) and the Mann-Whitney U-tests pointed to the Academic Panel as differentiating from the other panels (Lea:Aca, U:.034; HR:Aca, U:.017; HR:Lea, U:.696). Since the difference pertains to a higher level of SA to A scores in the Academic Panel, the difference did not warrant inclusion in round 2 for any panels.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments about the intention to explore confirmed that exploration demands a different range of leader behaviour than exploitation (A127; H83; L92). Awareness of which intention is pursued in each case is vital as leader behaviour promoting exploration can exercise hindering effects upon exploitative performance, and vice-versa (A160; A124; L82; L200; A31). When it is difficult to predict the outcomes, the leader should assume an entrepreneurial mindset encouraging experimentation and learning iterations to find the most viable path through ambiguous conditions (H53; A172). Also, severe resource constraints can spur a leader to pursue exploration when incremental improvements of a current setup are not a viable path (A127; L109; L57). See appendix J for additional findings.

**$H_4$ :** A leader can promote exploration and adaptive performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Round 1:**  $H_4$  was confirmed (L:98%; HR:95%; Aca:90%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The qualitative input from the panellists suggest that the leader can improve exploitative performance by developing the team's adaptive performance; by changing the composition of the team; and, by aligning goals and rewards to support the intention (H83; H42; H98). In continuation of the above effects of agency supporting exploration; nurturing a strong climate for explorative learning supports adaptive performance (A27; A68). Also, a strong climate for productive discussions promotes exploration (L109). Conversely, high levels of formalisation, such as many SOPs, in conjunction with a strong climate of diligence and discipline, make exploration more difficult (A127; L125; H42). See appendix J for additional findings.



#### *10.3.2.4 Factor: The intention to pursue human capital quality and contextual performance*

**Definition:** The intention to develop the human capital's quality and build high-quality relations conducive to the current or future organisational functioning. Focus on promoting contextual performance to enable either exploitation or exploration, or both.

**H<sub>5</sub>:** The intention to pursue human capital quality and contextual performance can influence the choice of leadership behaviour.

**Round 1:** H<sub>5</sub> was confirmed (L:86%; HR:88%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** To drive contextual performance and develop the quality of the human capital the leader should orchestrate relevant learning; dedicate follower time for competence development; obligate followers to convert learning into work behaviour; measure related performance outcomes; secure performance feedback; and, align rewards and recognition (A115; H81; A27; H35; H42; L92). Moreover, strong performance reviews and assertive handling of subpar performance drive the contextual performance and quality of human capital (H81; L9; A96). Also, to drive contextual performance, the leader should promote and facilitate purposeful relations in the organisation (L109; A68; H41; H53; A27; H144; L105). See appendix J for additional findings.

**H<sub>6</sub>:** A leader can promote human capital quality and contextual performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Round 1:** H<sub>6</sub> was confirmed (L:89%; HR:90%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** Skilled people can compensate for weaker structures, processes, and systems; and contextual performance is a key component in leveraging organisational structures, resources, processes, and systems; so, staffing is a vital way of influencing context in the intrinsic stratum to promote the human capital quality (H53; A27; A122; A31; L121; L57; L4; A74; A115; L27). Moreover, the HR policies and diligence in the enactment for recruitment, talent and employee development, performance reviews, compensation and rewards, retention, succession planning and promotion are key elements shaping how well an organisation continuously develops the quality of its human capital (H81; H124; A123; L82). See appendix J for additional findings.

### 10.3.3 Determinant stratum

In the determinant stratum, eight hypotheses were investigated, and two hypotheses were included in round two for all panels. See table 56.

**Table 56. Hypothesis confirmation overview, Determinant stratum**

Contextual factor	Hypothesis: The contextual factor can <u>influence the choice</u> of leadership behaviour	Hypothesis: The contextual factor can <u>help or hinder</u> either <u>leadership</u> or <u>employee work performance</u>
Physical distance	H <sub>7</sub> : ✓ 1	H <sub>8</sub> : ✓ 1
Risk intensity	H <sub>9</sub> : ✓ 1	H <sub>10</sub> : ✓ 1
External complexity	H <sub>11</sub> : ✓ 1	H <sub>12</sub> : ✓ 2
External dynamism	H <sub>13</sub> : ✓ 1	H <sub>14</sub> : ✓ 2

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

#### 10.3.3.1 Factor: Physical distance

**Definition:** How close or how far the members of the team or organisation are physically located from each other and the leader.

**H<sub>7</sub>:** Physical distance can influence the choice of leadership behaviour.

**Round 1:** H<sub>7</sub> was confirmed (L:94%; HR:90%; Aca:90%). The Kruskal-Wallis H-test raised attention to the difference in distributions (H:.027), and the Mann-Whitney U tests revealed a significant difference in the distributions between the leader and the HR panels (U:.033) and the leader and the academic panels (U:.017). However, despite the differences in panel score distribution, which pertain to significantly more SA to A scores in the Leader Panel than in the HR and Academic panels (see appendix L); the high level of consensus (90-94%) led to the conclusion that the factor was not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The analysis of comments confirmed that leading at a distance requires a range of leader behaviours different from leading in proximal conditions (A172; A122; A178; A130; A2; H95; H10; H123; L9; L107; L51; L105; H142). The leader needs to invest more energy in understanding the challenges and efforts put in by remote employees (H144; A130; H92; L97). The leader should also focus more on agreeing on outcomes, specifying relevant KPIs, clarifying accountabilities, and relying on empowered autonomy to get the work done (A96; H83; H95; L109; L97). Separation increases the importance for the leader to support less experienced remote employees in building up the fundamental task performance skills; and to support new teams in the integration process (L149; A96; H137; L82; L105; L27; A124). Also, it increases the demand for the leader to agree individually with each employee how they should be supported; which interaction frequency works best; how work should be followed up and performance assessed (A96; H83; H98; H81). See appendix J for additional findings.

***H<sub>8</sub>:*** Physical distance can help or hinder either leadership or employee work performance.

***Round 1:*** H<sub>8</sub> was confirmed (L:87%; HR:88%; Aca:84%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** For some people who prefer to work alone; treasure the opportunity to concentrate without disturbance; or, prefer not to have 'management supervision' to close a certain level of physical separation can help their work engagement and productivity (H59; H106; L40; L1; H98; A31). Moreover, being forced to work at the distance, as during the Covid-19 situation, can be conducive to work performance because people take more ownership without the opportunity to always 'double-check' with the leader; the leader does not 'micro-manage'; and empowerment is followed by more accountability and initiative (H80; H98; L125; L43). Distance exercises hindering effects by reducing the communicative richness (number of cues); by lowering the interaction frequency; and making the alignment of perceptions more difficult (A123; L200; A122; L9; L109; L92). The effects can lead to lower levels of organisational commitment; higher levels of psychological distance; a sense of isolation; lower trust in the team; and lower task performance; (A123; H42; H144; H51; L139; H116; H98; L108; L92; A124; L20). See appendix J for additional findings.

### 10.3.3.2 Factor: Risk intensity

**Definition:** The presence of threat or error potential; how bad the consequences would be; and, how likely it is to happen, ranging from high-risk to low-risk context.

**H<sub>9</sub>:** Risk intensity can influence the choice of leadership behaviour.

**Round 1:** H<sub>9</sub> was confirmed (L:98%; HR:98%; Aca:97%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The importance of the leader's effective engagement in risk assessment and sense-giving around the potential consequences; risk probability; risk tolerance; and mitigative measure increases with higher risk intensity (H142; L125; L200; L57; L36; L109; A74; A115; H101; L67; A31). Relatedly, the leader should build a practice for assessing what can be controlled; and manage these parts closely; while understanding what is outside the team's control when it comes to deciding preventive and mitigative actions (H142; H144; L57). In continuation, increased risk intensity drives a need for more supportive behaviour and instilling calm calculated focus on the controllable parts to ensure organisational members are coping and can perform (H123; L82; L105; L4; L107). When a threat is just about to manifest itself or is playing out, the leadership practice should shift towards a more urgent, decisive and directive leadership style to ensure speedy mitigative actions (A130; A27; H137; H98; A127). See appendix J for additional findings.

**H<sub>10</sub>:** Risk intensity can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>10</sub> was confirmed (L:93%; HR:88%; Aca:93%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** High risk intensity can positively impact performance, for example the risk of losing your job can increase extra-role performance; the evident presence of work hazards can strengthen the safety behaviour; the presence of immediate threat can spur initiative and increase focus and effort; and, risk can increase the propensity to admit insecurity and ask for help (H116; L125; L105; A31; L9; H98; H109; L36). Risk intensity can hinder performance by increasing fear to act; fear of making mistakes; stress levels, and anxiety (H116; H46; L107; A115; A31; H42; H55; L57).

It can also hinder effective decision-making for the leader with effects like 'playing not to lose'; postponing necessary decisions; preserving the status quo due to unhealthy risk averseness; or driving short-termism in decision making (A115; A178; A123; H53). See appendix J for additional findings.

### *10.3.3.3 Factor: External complexity*

**Definition:** The complexity outside the leader's area of responsibility influencing the decision making in the leader's area. The more elements influencing decision making and the greater the differences between them; the more complex the external environment is.

**H<sub>11</sub>:** External complexity can influence the choice of leadership behaviour.

**Round 1:** H<sub>11</sub> was confirmed (L:87%; HR:88%; Aca:87%) and not included in round 2.

#### ***Excerpt from the round 1 qualitative analysis confirming the definition and***

**hypothesis:** External complexity should make the leader increase the analysis of 'what is going on' in the external environment to ensure optimum decisions (A68; L82; L121). Leaders facing higher external complexity should engage their people to leverage the 'collective wisdom' in sense-making and spur critical thinking (A124; H101; L27; L49). Also, they should engage in sense-giving about what is going on and which implications it can incur (L4; H144). On the other hand, higher external complexity increases the importance of setting and communicating clear direction (H116; H123, H68; L200) and buffering the organisation from being bogged down by complexity (A123; L20). Hence, the leader should balance spending extra energy involving people and being directive and decisive to create clarity to mitigate the impact of complexity (H68; H142; L105). See appendix J for additional findings.

**H<sub>12</sub>:** External complexity can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>12</sub> was confirmed (L:85%; HR:86%; Aca:84%). Nevertheless, the hypothesis was contested in the Academic Panel in round 1 (IQR = 1.5), see table 57 below. To learn more and allow all panels the same opening, the factor was included in all panels in round 2.

Table 57. Delphi results External complexity - help/hinder		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
Median		4,00	4,00	4,00	4,00	4,00	4,00
Mode		4	4	4	4	4	5
IQR		1,00	1,00	1,50	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	1	0	0	0
		0%	0%	3%	0%	0%	0%
Disagree (D)		3	3	3	3	0	2
		6%	7%	10%	7%	0%	7%
Neither agree nor disagree (N)		4	1	1	3	0	3
		9%	2%	3%	7%	0%	10%
Agree (A)		26	22	17	22	20	10
		55%	54%	55%	51%	54%	35%
Strongly agree (SA)		14	13	9	15	17	14
		30%	32%	29%	35%	46%	48%
Total judgements		47	41	31	43	37	29
Do not know (2) or missing		0	2/0	0	0/0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The qualitative feedback from round 1 concern that simple markets with low external complexity make decision making and management processes easier for the leader, whereas a more complex external environment, for example, high levels of regulation or intense competition makes decision making more difficult and slower (L36; A124; L108; L113; L43). Moreover, higher complexity can trigger uncertainty, anxiety, confusion, and unpredictability impeding performance and making effective leadership more difficult (A122; A31; L9; L125; H123). As the only one, H83 remarked that external complexity does not affect leadership behaviour or employee performance. Some panellists state that time pressure acts as an intensifier increasing the difficulties from external complexity on decision making (H98; L107; A124). Moreover, L121 and H48 report that the causal effects of external complexity are intensified through the interaction with dynamism and risk intensity in the external environment referring to the term VUCA (Volatile; Uncertainty; Complex; Ambiguous).

**Round 2:** H<sub>12</sub> was confirmed (L:86%; HR:100%; Aca:83%) while also meeting the IQR criteria of maximum 1.00 in all panels. The comments confirm agreement that higher external complexity makes decision making more complicated (H149; H15; H92; L139; L39; A32; A70); requires higher requisite competences (H144; L139; L4; L58; A127); increases the importance of engaging in joint sense-making (H21; H41; L108; A123; A160; A32); and, increases the need for active leadership agency (H35; H41; H66; H81; L132; L140; L145; L20; A13; A16).

Higher complexity can incur ambiguity and stress influencing work performance negatively (L155; L139; L108; H144; L57; A15; A48; A96); but, also spur a motivating effect of facing 'challenging complexity' and handling it (L82; A127) as well as improving performance through inspiration to new ways of working (A15). See appendix J for additional findings.

#### *10.3.3.4 Factor: External dynamism*

**Definition:** How much, how often, how fast, and how predictably the elements which influence decision making from outside the leader's area of responsibility change.

**H<sub>13</sub>:** External dynamism can influence the choice of leadership behaviour.

**Round 1:** H<sub>13</sub> was confirmed (L:89%; HR:86%; Aca:91%) and not included in round 2.

#### ***Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:***

External dynamism increases the need for speed in decision making; attention to what is going in the external environment and anticipation through sense-making and communication from the leader to enable the organisational agility (L57; A130; L125; L43; L4; L113). An effect of a high external repeatable dynamism can be to give rise to necessary short-termism and high pace action in leadership (H116; L9; L57; L36) making it important for the leader to create a strong path-goal climate to support sense-making and performance among the followers (H144; H123). A more disruptive dynamism demands sense-making capacity with the leader to understand how to best respond to the jolts (L200; H42; H123). Responding to dynamism taps into the need for activating the collective wisdom and joint critical thinking also identified under external complexity (A124; H101; L27; L49). See appendix J for additional findings.

**H<sub>14</sub>:** External dynamism can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>14</sub> reached the agreement threshold (L:79%; HR:88%; Aca:84%) but was contested in the Leader Panel in round 1 (IQR = 1.25), see table 58 below. Moreover, there were in total 14 panellists answering N, which might indicate considerations about contingencies influencing the manifestation of causal powers, rather than the existence of causal powers per se. Hence, it was decided to investigate further by including the hypothesis in round two for all panels.

Table 58. Delphi results External dynamism - help/hinder		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	5
	IQR	1,25	0,00	1,00	1,00	0,50	1,00
Strongly disagree (SD)	Count	0	0	1	0	0	1
		0%	0%	3%	0%	0%	3%
Disagree (D)		2	1	2	1	0	1
		4%	2%	6%	2%	0%	4%
Neither agree nor disagree (N)		8	4	2	5	2	2
		17%	10%	6%	12%	6%	7%
Agree (A)		24	28	14	26	26	11
		51%	68%	45%	60%	70%	38%
Strongly agree (SA)		13	8	12	11	9	14
		28%	20%	39%	26%	24%	48%
Total judgements		47	41	31	43	37	29
Do not know or missing		0	0	0	0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** External dynamism can challenge decision-making quality. High dynamism reduces the time for decision-making, limiting the opportunities for collecting and considering data; involving people in the decision; and increasing the risk of a wrong decision (A130; A124; L142). The decision pressure highlights the importance for a leader to know when to make a fast decision and when to defer the decision to ensure decision quality (H101). Also, the ambiguity and unpredictability incurred from external dynamism raise the attention of recruiting people who thrive in such environments (L109; L125). Moreover, dynamism challenges planning and drives more changing priorities, which hinders effective leadership and work performance (A127; A160; L2). In addition, dynamism incurs a risk of diluting focus in the organisation, highlighting the importance of organisational resilience and tolerance for uncertainty and ambiguity (A32; A115; A96). Furthermore, it implies the need for a strong goal-path climate allowing the combination of clear, stable overall direction guiding the day-to-day contingent choices (L57; L125). A certain level of dynamism in the external environment can help leaders through a positive pressure to ensure the necessary continuous development of processes and the organisation (H98, L27), while low dynamism helps leadership and work performance through the stability supporting explorative performance (A160).



**Round 2:** H<sub>14</sub> was confirmed (L:86%; HR:94%; Aca:86%) and met the IQR and across-panel distribution criteria, see table 58 above. The qualitative analysis of round 2 comments nuanced that external dynamism challenges planning (L43; L49; L58) and demands that the leader continuously monitor, interpret, and adapt leadership to mitigate the hindering effects (L105; H1; L108; L109; L36; L57; A16). See appendix J for further nuancing.

### 10.3.4 Systemic stratum

Seventeen hypotheses were investigated in the systemic stratum of which seven were contested in round one and included in one or more panels for round two. See table 59.

**Table 59. Hypothesis confirmation overview, Systemic stratum**

Contextual factor	Hypothesis: The contextual factor can <u>influence the choice of leadership behaviour</u>	Hypothesis: The contextual factor can <u>help or hinder either leadership or employee work performance</u>	Hypothesis: A leader can <u>increase or decrease the contextual factor</u> in their leadership context within the limitations given by the organisational and external context
Hierarchical level	H <sub>15</sub> : ✓ 2	H <sub>16</sub> : ✓ 2	Not tested
Centralisation	H <sub>17</sub> : ✓ 1	H <sub>18</sub> : ✓ 1	H <sub>19</sub> : ✓ 2
Formalisation	H <sub>20</sub> : ✓ 1	H <sub>21</sub> : ✓ 1	H <sub>22</sub> : ✓ 1
Internal complexity	H <sub>23</sub> : ✓ 2	H <sub>24</sub> : ✓ 1	H <sub>25</sub> : ✓ 2
Interdependence	H <sub>26</sub> : ✓ 1	H <sub>27</sub> : ✓ 1	H <sub>28</sub> : ✓ 2
Resource constraints	H <sub>29</sub> : ✓ 1	H <sub>30</sub> : ✓ 1	H <sub>31</sub> : ✓ 2

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.4.1 Factor: Hierarchical level

**Definition:** Whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.

**H<sub>15</sub>:** The hierarchical level can influence the choice of leadership behaviour.

**Round 1:** H<sub>15</sub> was contested on the IQR in the leader and HR panels in round 1 despite meeting the 70% threshold in all panels (L:77%; HR:71%; Aca:83%). See table 60 below. In round one, the qualitative analysis (follows after the table) indicates that some panellists believe that the hierarchical level does not influence authentic leadership. The results were analysed in conjunction with the next question hypothesising that hierarchical level can help or hinder. As the "help/hinder" hypothesis was contested in all panels, it was decided to also repost the "choice" hypothesis to the Academic Panel.

Table 60. Delphi results Hierarchical level - choice		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
Median		4,00	4,00	4,00	4,00	4,00	4,00
Mode		5	4	5	5	4	5
IQR		1,25	1,25	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	1	2	1	1	1
		2%	2%	7%	2%	3%	3%
Disagree (D)		6	5	0	3	0	0
		13%	12%	0%	7%	0%	0%
Neither agree nor disagree (N)		4	6	3	3	4	3
		9%	15%	10%	7%	10%	11%
Agree (A)		13	15	12	16	21	11
		28%	37%	40%	37%	57%	38%
Strongly agree (SA)		23	14	13	20	11	14
		49%	34%	43%	47%	30%	48%
Total judgements		47	41	30	43	37	29
Do not know or missing (1)		0	0	0/1	0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** There are some leadership practices which are important no matter the level, such as being authentic or holding people accountable (A48; H101, H68; L43; L2). Other leadership practices vary in importance with the hierarchical level, for example, leading leaders rather than individual contributors, or day-to-day versus long-term focus (H101; L92; L43; A74; H98; L58, L113).

This is, as noted by L58, in line with the leadership pipeline concept. Related hereto some note that leadership flows from the influence a person, appointed leader or not, exercises in an organisation, not from the position alone (L200; H59; H123; L67). However, an appointed leader's position level influences the leadership expectations that guide the leader's behaviour and influences how the organisation acts in response to requests (L43; L200; A68; A96; L107; H144). The importance of acting in accordance with certain leader expectations related to different hierarchical levels is intensified in some national and company cultures, for example, the differences in power distance between countries or the level of 'formality' in the corporate culture (H128; H53; H124; L125; L27; L201; H46; L39; L57).

**Round 2:** H<sub>15</sub> was confirmed (L:84%; H87%; Aca:86%). The comments nuance the numbers further: The mandate and power assigned to the position influence the leader's opportunity to influence, mobilise resources, make decisions and lead, positively or negatively (H103; H135; H42; A124; A13; A32; A48, A70; A84; A96). The organisational expectations, hereunder the expectations from the immediate manager, are related to the hierarchical level, which in turn, influence the choice of leadership behaviour, positively or negatively (H144; L145; L155; L26; L28; L44; L57; L97; A122; A124; A15; A2; A79). There are differences in which behaviours from the leadership behaviour range that are most effective for leading an organisation (C-level), leading leaders in the organisation and leading individual contributors (H137; H21; H41; H42; H53; H81; H92; L108; L2; L43; L57; L67; L73; A122). See appendix J for additional findings.

**H<sub>16</sub>:** Hierarchical level can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>16</sub> was contested (IQR = 1.25-2.00, and L:77%; HR:68%; Aca:76%), see table 61 below. The high IQR indicates differentiation in perception, and the high number of N scores (19 panellists) warranted the inclusion in round 2.

Table 61. Delphi results Hierarchical level - help/hinder		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	4
	IQR	1,25	1,50	2,00	1,00	1,50	1,00
Strongly disagree (SD)	Count	1	1	1	0	1	0
		2%	2%	3%	0%	3%	0%
Disagree (D)	Count	5	3	0	1	1	0
		11%	7%	0%	2%	3%	0%
Neither agree nor disagree (N)	Count	5	8	6	2	8	3
		11%	20%	21%	5%	21%	10%
Agree (A)	Count	18	18	11	23	18	17
		38%	44%	38%	53%	49%	59%
Strongly agree (SA)	Count	18	10	11	17	9	9
		38%	24%	38%	40%	24%	31%
Total judgements		47	41	29	43	37	29
Do not know (1) or missing (2)		0	1/0	0/2	0	0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** Two accounts contend that the more empowered an organisation is, the less an influence hierarchical level has on leadership expectations and enactment (A31; L82). However, the opportunity to share leadership in a flat structure relates to the nature of the business, e.g. advisory firms and smaller companies (A31; L82; L121), hence, in larger organisations differences in leader position level seems to exercise an effect on leadership. Also, being placed in the frontline can help leadership through first-hand insight and opportunity to show the way; while it can hinder effective decision making for the leaders at a higher level relying on second-hand accounts; not being told the 'ugly truth' and having to rely on giving overall directions (L139; H98; A32). The higher the placement in the hierarchical level the stronger formal authority a leader usually holds, which, helps leadership through the mandate to 'get things done' (H59; A68; A160; H10; A27; A127; A95). This formal power can help the position holder influencing others; nevertheless, it is in combination with personal leadership the formal power has most effect; as formal power can only unfold in combination with a sufficient level of authentic leadership (L82; L200; H59; A27; H144; L67, L4). Moreover, the impact of positive and negative role modelling seems to increase with hierarchical level as the higher a position, the more exposed to the interpretation of behaviour a leader is (A84; A2; H59; L105).

From another vantage point, the hierarchical level itself does not help or hinder leadership fostering that the leader has adapted her leadership to the range of leadership most effective at the given level (A74; L105; H83). However, applying the same style and range of leadership when moving from one level to the next is likely to result in leadership failure, so a mismatch between positional level and the leader's way of leading can hinder performance (A74; H42; L20; L105).

**Round 2:** H<sub>16</sub> was confirmed (L:93%; HR:73%; Aca:90%). However, the Kruskal-Wallis H test (H:.045) and the Mann-Whitney U test revealed significant differences between the leader and the HR panels (Lea:Aca, U:.576; HR:Aca, U:.085; Lea:HR, U:.018). The difference indicates a clearer perception among the Leader panellists as they have relatively more SA scores than the HR and Academic panels. The one HR panellist (H68) who answered SD left no comments; while three of the eight HR panellists with N-scores in their comments confirmed that hierarchical can influence leadership and work performance; but that they scored N to make the point that personal leadership capacity outweighs these effects. Several panellists support that hierarchical level ascribes power to influence which can help leadership effectiveness (L2; L26; L36; L73; A146; A160; A27; A87). Also, the comments suggest that hierarchical level can hinder effective leadership, especially if there is a mismatch between positional demands and leadership range applied (H42; H137; L36; L43; A32) or if the power to influence is not sufficient for the challenge assigned (L26; L73; A146). Being placed at a higher positional level can hinder effective informed decision making unless a strong practice for obtaining necessary frontline insight is established, or the necessary empowerment is embedded in the organisation (H66; H92; L124; L28; A160).

#### 10.3.4.2 Factor: Centralisation

**Definition:** The degree to which decision authority and mandate are kept centralised or delegated into the organisation.

**H<sub>17</sub>:** Centralisation can influence the choice of leadership behaviour.

**Round 1:** H<sub>17</sub> was confirmed (L:91%; HR:90%; Aca:90%) and not included in round 2.

#### **Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:**

The comments concerned that a leader needs awareness of the split between own mandate; centralised mandates; and decentralised mandates to support and ensure optimal organisational functioning (L200; H10; H42; A74; A16; H144; L109; H53).

In continuation, a leader should fill own mandate with leadership; be aware of the limits to own mandate; and, engage in sense-giving around the rationales of adjacent centralisation and decentralisation to ensure it does not hinder engagement within own leadership context (H10; H42; L200; L105; L140). The sense-giving pertains to explaining the balance between alignment and autonomy in the different processes, roles, and areas of functioning (L200; A130; H116; L36; L49). The level of decentralisation influences which decisions; stakeholder management and sense-giving the leader should choose to be engaged in and spend time on (A130; H116; H98; H46; L113). See appendix J for additional findings.

**H<sub>18</sub>:** Centralisation can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>18</sub> was confirmed (L:87%; HR:90%; Aca:87%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** Leadership autonomy through decentralised mandates can help leaders and followers make faster decisions; take self-initiated empowered action; and decentralisation positively influences organisational accountability (A124; L82; L57; H83; L143; L43; L20). On the other hand, centralisation can lead to less local accountability; less contextual and adaptive performance; a sense of 'them and us' between local entities and HQ; and a retention risk for people motivated by empowerment (A84; H42; L20; H83; A123). Centralisation can reduce speed in local leadership interventions or work performance when decisions need to be sent up the hierarchy for approval (L108; A122). Conversely, centralising certain decisions can make it easier and quicker for an organisation to get answers; however, this can negatively influence effective local leadership who feels disempowered (A96; L82). See appendix J for additional findings.

**H<sub>19</sub>:** A leader can increase or decrease centralisation in their leadership context within the limitations given by the organisational and external context

**Round 1:** H<sub>19</sub> was contested (L:74%; HR:85%; Aca:65%) as only the HR Panel met the consensus criteria of an IQR of 1.00, See table 62 below. That the factor was contested in the other two panels led to the decision to include the factor for the Leader and Academic panels in round 2.

Table 62. Delphi results Centralization - increase/decrease		Round 1			Round 2	
		Lea	HR	Aca	Lea	Aca
	Median	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4
	IQR	2,00	1,00	1,50	1,00	0,00
Strongly disagree (SD)	Count	1	0	0	0	0
		2%	0%	0%	0%	0%
Disagree (D)		4	1	3	3	1
		9%	3%	12%	7%	3%
Neither agree nor disagree (N)		6	3	5	3	4
		13%	8%	19%	7%	14%
Agree (A)		19	20	12	20	18
		41%	50%	46%	47%	62%
Strongly agree (SA)		15	14	5	16	5
		33%	35%	19%	37%	17%
Total judgements		46	40	26	42	28
Do not know (4) or missing (5)		1/1	2/0	1/4	1/0	1/0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The level of centralisation should have a requisite fit to the external environment (L36; L57; L92; H81) and a fit to the leadership intentions to explore and/or exploit (L108; A84; H81; A122). Because, whether centralisation helps or hinders leadership and performance depend on the 'fitness' for purpose and a leader should actively increase or decrease centralisation accordingly. For example, determine which elements in a global supply chain should be decided centrally and run as fully aligned practices; and which elements are best served through decentralised mandates with local autonomy (A115; A127; H15; H68; L117; L67; L27; L2). Most leaders can centralise or decentralise mandates to some extent in the organisation reporting to them. It needs to be done while considering the path dependence created by the organisational culture and decisions about centralisation and decentralisation outside the leader's influence zone (A95; A74; A123; A2; A124; H15; H144; L109; L121; L108).

**Round 2:** H<sub>19</sub> was confirmed (L:84%; A;79%) as also the leader and the Academic panels reached consensus. The comments confirmed that the leader can increase or decrease centralisation. Also, the comments elaborated that the leader's opportunities for increasing or decreasing centralisation depend on the degrees of leadership freedom determined by the strategy for the functional area (L125; L155; L2; L36; L39; L57; L73; L97; L98; A123; A160; A48).

Moreover, adjusting centralisation in the leadership context should be based on monitoring the determinant factors influencing performance and in/decreasing to maintain the best possible requisite fit (L139; L2; L43; L58; A13; A146; A160). See appendix J for additional findings.

#### 10.3.4.3 Factor: Formalisation

**Definition:** The level of centrally or locally decided documented policies, procedures, rules, and guidelines which must be followed.

**H<sub>20</sub>:** Formalisation can influence the choice of leadership behaviour.

**Round 1:** H<sub>20</sub> was confirmed (L:83%; HR:83%; Aca:81%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The comments concerned that in most companies, there are formalised codes of conduct, policies and procedures that a leader must follow. Hence, the leader must engage in building awareness about the level of formalisation and the related strength of the climate for diligence and discipline in all areas relevant for the leadership and work performance conduct (A74; A68; L1; H101; H98; L139; L125; H83). For the formalisation to have an effect, the leader should engage in sense-giving as the joint sense-making from formalised documentation to joint perceptions of the expected behavioural manifestation is imperative for it to become a social regulation mechanism (L57; L9; L113; A115; A96; H123; L200). That is, formalisation influences a leader to leverage existing formalised rules, regulations, principles or policies to align expectations; build common ground around how 'we do around here' and in continuation hereof reinforce this behaviour (L82; L105; L140; A96; H53). See appendix J for additional findings.

**H<sub>21</sub>:** Formalisation can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>21</sub> was confirmed (L:79%; HR:90%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** Formalisation creates predictability about expectations and makes it easier to understand and adhere to norms and standards; it supports handling internal complexity; it increases efficiency as documentation allows the reuse of previous experience; and forms the basis for operational consistency (L9; L27; L139; L43; A130; A31; H123; L200).



However, if formalised processes and ways of operating are out of sync with the purpose of the process; is not updated or is over-formalised making operating cumbersome it can hinder effective work performance (L125; H98; A127; L27; A123). Also, a high level of formalisation can hinder work performance and leadership through a 'fear of breaking the rules'; a lower level of felt autonomy; complacency, which in turn, hinders critical thinking and necessary productive discussions (L139; L109; H42; H98; A123; L27; L201; H81). It follows that higher levels of formalisation hinder creativity and innovation (H68; L43; L200; A84; A123; L201). See appendix J for additional findings.

**H<sub>22</sub>:** A leader can increase or decrease formalisation in their leadership context within the limitations given by the organisational and external context

**Round 1:** H<sub>22</sub> was confirmed (L:79%; HR:76%; Aca:86%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments confirmed that a leader can increase and to some extent decrease formalisation. Relatedly, that a leader needs to recognise when the level of formalisation of a given process is not fit for purpose and should be amended or increased; or where compliance deliberately should not be 100% to the formalised documentation (L1; H98; L57; L27; A31; L109; H53; H68). Also, that the extent to which a leader can in- or decrease the level for formalisation for processes, policies and codes of conduct in her leadership context depends on the level of formalisation imposed by the company or legislation, and the leader's opportunity to influence such externally decided formalisation (L43; L105; A123; L41). See appendix J for additional findings.

***10.3.4.4 Factor: Internal complexity***

***Definition:*** The number of different job roles and specialised functions within the leader's area. In addition, within each function; the task complexity; that is the number of unique acts and information pieces required for the task. Also, how new the tasks are and how often the task requirements change.

**H<sub>23</sub>:** Internal complexity can influence the choice of leadership behaviour.

**Round 1:** H<sub>23</sub> was confirmed in the leader and academics panels (L:91%; HR:78%; Aca:84%). See table 63 below.

However, it was contested in the HR Panel with an IQR of 1.25, and a lower level of agreement than the other panels (78%) indicate considerations about contingencies from nine panellists. It was decided to investigate further by including it in round two for the HR Panel.

Table 63. Delphi results Internal complexity - choice		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	4,00	4,00	4,00	4,00
	Mode	4	5	4	4
	IQR	1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	1	0	0	0
		2%	0%	0%	0%
Disagree (D)		2	3	1	1
		4%	7%	3%	3%
Neither agree nor disagree (N)		1	6	4	2
		2%	15%	13%	5%
Agree (A)		25	15	14	21
		53%	37%	45%	57%
Strongly agree (SA)		18	17	12	13
		38%	41%	39%	35%
Total judgements		47	41	31	37
Do not know or missing		0	0	0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The higher the internal complexity; the bigger the demands to leading different functional staff groups; engaging with different job content; ensuring collaboration; structuring coordination and meetings; scoping jobs; involving stakeholders; acquiring and coordinating resources; paving the way when trouble arises; and helping employees navigate (A31; A84; H42; L121; L1; L49; H68; A74; A160; L82; L113). In the areas where complexity is necessary for the value creation, the leader should focus on understanding value-adding, and non-value-adding complexity (H53; L125; H68; L27) as the latter should be reduced and the former actively led. Also, the leader should engage in sense-giving around the necessary complexity, its requisite reasons, its effective handling, and its mitigation measures (L57; L36; L92; L49; H81; H68) because complexity holds a potential to demotivate some people (A160; H59; L140). Moreover, the higher the complexity, the more important developing a strong climate for collaboration and for empowerment becomes as the leader must rely on the expertise distributed in the organisation to handle the complexity (H116; L109; A31; L125; L105).

In addition, the strength of the goal-path climate can mitigate some effects from internal complexity by supplying clear direction and priorities for the members to navigate and coordinate from (A124; H68; L1). The internal complexity interacts with interdependence, where boundary-spanning complexity can trigger interdependence while resource- or other interdependence can increase complexity (L57; L27; H144; A74; A123).

**Round 2:** H<sub>23</sub> was confirmed also in the HR Panel (HR:92%) meeting the IQR criteria. The comments mentioned an increased need to facilitate closer and more frequent collaboration in response to increased internal complexity (H10; H92). Also, that increased complexity puts higher demands on work performance, which, in turn, demands more supportive leadership behaviour (H103; H41). See appendix J for additional findings.

**H<sub>24</sub>:** Internal complexity can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>24</sub> was confirmed (L:87%; HR:87%; Aca:87%). and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** The qualitative analysis showed that increased internal complexity makes it more difficult to perform; it drives up the error potential; it reduces the possibility for the leader to be 'in the details'; it increases the time and energy needed for coordination; and it can breed stress (H83; H53; H116; L1; L9; H98; H59; A122). Conversely, it follows that low internal complexity can help leadership and work performance. In addition, for some employees, value-adding complexity is a strong motivating factor which can help adaptive work performance; increase team cohesion; and create 'Flow' experiences (A96; H98), while for others higher complexity can decrease morale and engagement (A160; H59; L140). See appendix J for additional findings.

**H<sub>25</sub>:** A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>25</sub> was contested as only the Academic Panel met both the consensus criteria (L:70%; HR:68%; Aca:84%). The factor was contested on the agreement in the HR Panel (68%) and the distribution in the Leader Panel with an IQR of 1.25. See table 64 below.

In both panels, there was an interesting number of N scores (L:10; HR:9) indicating the relevance of understanding their considerations behind. To learn more, the factor was included in round 2 for the HR and Leader panels.

Table 64. Delphi results Internal complexity - increase/decrease		Round 1			Round 2	
		Lea	HR	Aca	Lea	HR
Median		4,00	4,00	4,00	4,00	4,00
Mode		4	4	4	4	4
IQR		1,25	1,00	1,00	1,00	0,00
Strongly disagree (SD)	Count	0	0	0	0	0
		0%	0%	0%	0%	0%
Disagree (D)	Count	4	4	2	2	0
		9%	10%	6%	5%	0%
Neither agree nor disagree (N)	Count	10	9	3	4	8
		21%	22%	10%	9%	22%
Agree (A)	Count	23	20	16	26	22
		49%	49%	52%	60%	59%
Strongly agree (SA)	Count	10	8	10	11	7
		21%	20%	32%	26%	19%
Total judgements		47	41	31	43	37
Do not know or missing		0	0	0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The leader can reduce complexity by simplifying coordination; clearing up competing priorities; identifying and fixing root causes; strengthening coordination; and resolving conflicts (H53; A172; A115; A123; A95; A127; H81). Decreases in internal complexity are positively related to performance (H116; L27; L43; A68). In the same vein, increased complexity increases the need to substitute personal leader insight with processes and systems which support the leader in understanding progress, priorities, and problems (L92). In turn, such formalised processes can reduce complexity; improve coordination; reduce conflict; ensure cross-functional collaboration; and reduce the effect of bottlenecks (L92; H144; A68). Similarly, decentralisation can decrease coordination complexity (L43; L108; L1). It can be more challenging to decrease internal complexity necessary to handle external complexity, such as a requisite process fit to meet customer and market dynamics (L57; H53; L125; H68). Also, most leaders would not be able to decrease the internal complexity stemming from the company's business model or strategic intentions (L36; A122); only ensure that they lead effectively accordingly.

**Round 2:** H<sub>25</sub> was confirmed in both the Leader and HR panels (L:86%; H78%) assisted by satisfactory IQR scores (L:1.00; HR:0.00). The panellists commented in support of the hypothesis that to influence internal complexity, tasking is an important discipline, and the leader should consider how tasks can be grouped into less complex jobs, roles, and functions (L73; L57). Also, that clarity in the delegation of authority, job responsibilities, task accountabilities and coordination demands can reduce internal complexity (L43; L109; H135). See appendix J for additional findings.

#### *10.3.4.5 Factor: Interdependence*

**Definition:** The number and character of dependencies extending across jobs, functions or organisational boundaries related to tasks, goals, information, resources, approval or learning.

**H<sub>26</sub>:** Interdependence can influence the choice of leadership behaviour.

**Round 1:** H<sub>26</sub> was confirmed (L:85%; HR:91%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** The comments identified understanding the nature of the work and subsequent interdependence which impacts the within-unit performance, and the boundary-spanning performance as part of the basis for effective leadership (A172; A127; A68; A84; L36; H123). In turn, the leader should actively facilitate the exchanges; engage in sense-making; establish clear processes; secure effective handovers; build within-unit cross-organisational understanding; align goals and priorities between the interdependent parties; and facilitate trust-building, related to the resource and attention investment needed (H98; H123; L27; L200; A31; A16; H35; H68; L92). See appendix J for additional findings.

**H<sub>27</sub>:** Interdependence can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>27</sub> was confirmed (L:83%; HR:95%; Aca:87%) and not included in round 2.

**Comments from the round 1 qualitative analysis confirming the definition and hypothesis:** Here, the thematic analysis revealed that interdependence can help performance through knowledge transfer; better resource utilisation; well-functioning cross-functional processes; organisational cohesion; alignment; and an increased capacity to handle complexity (L57; L27; L113; A123).

Conversely, interdependence can negatively influence performance by creating uncertainty and delays from waiting; by spurring more misunderstandings; conflicts; misaligned priorities; or by incurring unclear governance and escalation paths (L108; H68; L67: L121; L200; L107).

**H<sub>28</sub>:** A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>28</sub> was contested by high IQR in the HR and Academic panels (L:1.00; H:1.25; A:2.00) and not meeting the consensus threshold in the HR Panel (L:72%; HR:61%; and Aca:74%). See table 65 below. Moreover, six 'Do not know' answers together with 18 'Neither agree nor disagree' across the three panels raised the attention. Hence, it was decided to include the factor for all panels in round 2.

Table 65. Delphi results Interdependence - increase/decrease		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	4
	IQR	1,00	1,25	2,00	0,00	0,00	1,00
Strongly disagree (SD)	Count	0	0	1	0	0	1
		0%	0%	3%	0%	0%	3%
Disagree (D)		4	6	2	4	1	1
		9%	15%	6%	9%	3%	4%
Neither agree nor disagree (N)		8	6	4	3	7	0
		17%	15%	13%	7%	19%	0%
Agree (A)		24	19	14	28	23	19
		52%	46%	45%	65%	62%	65%
Strongly agree (SA)		9	6	9	7	6	8
		20%	15%	29%	16%	16%	28%
Total judgements		46	41	31	42	37	29
Do not know (6) or missing (1)		1/1	4/0	1/0	1/0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** Creating cross-organisational

collaboration, i.e. 'breaking down silos' through active leadership interventions such as identifying cross-functional bottlenecks and allocating resources to reduce them, was identified as an important leadership task.

This type of interdependence driven by the nature of the work is difficult to decrease; hence, it is more a question of how the leader effectively leads accordingly (L27; A172; L43; L92; A96; A84; H116). Besides the interdependence driven by necessity from the nature of the work; the leader can increase interdependence by forcing collaboration or coordination to decrease organisational vulnerability. Doing so, can increase the flexibility by spreading competences and process knowledge (H98; A160). Paradoxically, in turn, this can reduce organisational interdependence. Some organisations have increased their interdependence by implementing matrix-type structures to gain coordination, flexibility, and alignment (A160; L121; L67). Also, interdependence can be increased by establishing shared goals, setting up meetings, or establishing governance. Such decided interdependence can result in better qualified decisions, for example, through a 'grandfather' principle where certain decisions need to be approved by an assigned peer; more divergent thinking in innovation; better solutions for clients; or better resource utilisation (H98; L57; L200).

**Round 2:** H<sub>28</sub> was confirmed (L:81%; HR:78%; Aca:93%), even though there were still seven HR panellists answering 'N'. The comments indicate that the leader plays an active role in creating optimal collaboration across different functions, breaking down silos and promoting value-adding interdependence, for example by organising the sharing of best practice, co-creating solutions, rotating staff or sharing goals (H135; H137; H15; H42; L109; L39; L57; L73; L98; A123; A160). Simultaneously, when aiming to decrease interdependence the leader should be cognizant of reasons outside own leadership context warranting the level of interdependence and avoid sub-optimising in pursuit of more or less interdependence (H144; H149; L125; A122; A127). See appendix J for additional findings.

#### *10.3.4.6 Factor: Resource constraints*

**Definition:** The availability of the resources that are necessary to operate. Including available resources and resources which can be freed up through optimisation or prioritisation.

**H<sub>29</sub>:** Resource constraints can influence the choice of leadership behaviour.

**Round 1:** H<sub>29</sub> was confirmed (L:85%; HR:88%; Aca:81%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments suggest that operating in an environment with resource constraints is usual for most leaders. It is an integrated part of the leader's job to analyse and justify resource needs based on the organisational goals and intentions; to prepare plans; suggest and negotiate resource allocation; and secure the appropriate use of resources on the most value-adding activities (A123; L1; L200; A32; H10; H123; L20; L92). Resource constraints influence the choice of leader behaviour in several ways. In some low margin industries or periods with poor performance, with a very low level of slack resources, a leader needs to be very diligent in the cost follow-up. In other industries, or in periods of higher profitability, the leader can have more slack resources which can be allocated upfront to drive projects (H80; L200; L39). It is also the leader's task to align expectations with own manager within the given resource constraints to ensure performance and that organisational health is not threatened by excessive demands; work overload; or unrealistic targets (H10; H42; H144; H59; L105). See appendix J for additional findings.

***H<sub>30</sub>:*** Resource constraints can help or hinder either leadership or employee work performance.

***Round 1:*** H<sub>30</sub> was confirmed (L:95%; HR:93%; Aca:87%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** There are several hindering effects of scarce resources; it makes innovation more difficult; it can lead to delays; it can result in uneven workloads, stress and burnout, for example in periods with hiring freeze or staff reductions; it can incur repetitive reprioritisation of efforts; or lower productivity due to lack of critical competencies or resources (A160; A123; L113; H123; A96; H68; A74; H124; L49). Paradoxically, more severe resource constraints can help spur innovation, entrepreneurial thinking, and creative solutions to overcome the challenges (H53; A172; A127; H144; H68; L105; L109). Naturally, relaxed resource constraints can help leadership and work performance through investments in tools; time; talent; attention; and education (H53; H80; L200; L39; A27; A74; H124). Conversely, resource munificence also seems to potentially entail hindering effects such as less sense of urgency; less drive to innovate or change; and less drive for resource optimisation (L125; L109; L200; L105). See appendix J for additional findings.



**H<sub>31</sub>:** A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>31</sub> was contested both on agreement (L:67%; HR:68%; Aca:68%) and on IQR (L:1.25; HR:1.25; Aca:2.00). The levels of agreement indicated but did not confirm that a leader can influence the resource constraints. Hence, it was decided to include the factor in round two in all panels.

Table 66. Delphi results Resource constraints - increase/decrease		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
Median		4,00	4,00	4,00	4,00	4,00	4,00
Mode		4	4	4	4	4	4
IQR		1,25	1,25	2,00	1,00	0,50	0,50
Strongly disagree (SD)	Count	0	0	1	0	0	1
		0%	0%	3%	0%	0%	3%
Disagree (D)		7	2	4	4	2	1
		15%	5%	13%	9%	5%	4%
Neither agree nor disagree (N)		8	7	5	3	7	3
		17%	18%	16%	7%	19%	10%
Agree (A)		17	18	12	24	20	17
		37%	45%	39%	56%	54%	59%
Strongly agree (SA)		14	9	9	12	8	7
		30%	23%	29%	28%	22%	24%
Total judgements		46	40	31	43	37	29
Do not know (4) or missing (2)		0/1	4/1	0	0	0	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The comments signal that there are resource boundaries that a leader needs to understand. The resource allocation process in certain organisations or projects allow very limited options for the leader to reprioritise or shuffle the resources around, for example public organisations or tightly scoped projects (A123; H135). In the same vein, external resource scarcity can limit the opportunities to increase a needed resource, for example when a leader has the budget to hire but cannot acquire the necessary talent in the market (A124; A74). Also, there is the experience that the higher the leader is placed in the hierarchy; the more influence on resource constraints (A127; A31; A160). Relatedly, a leader's ability to negotiate demands and resources influences the ability to acquire resources and deliver on targets (A32; H42; H59).

Within these constraints many leaders operate with resource trade-offs, for example increasing the resources spent on training to compensate for lack of accessible talent; or decreasing the resources spent on some activities to allocate the resources to other purposes (A124; A160; A68; A115). Besides the reallocation within own mandate, most leaders occasionally experience being tasked with reducing resources; which increases the importance of the leader's ability to prioritise and explain the necessary prioritisation (A123; H53; H123). Together, this indicates the importance for the leader to understand which resources are addressable in her action zone; which can be influenced through negotiation; and which are non-addressable resources constraints.

**Round 2:** H<sub>31</sub> was confirmed (L:84%; HR:76%; Aca:83%). The reassessment also moved all IQR scores from contested to confirmed, see table 66 above. The comments highlighted that it is a key task for the leader to promote performance by assessing and scoping the incoming performance requirements; and purposefully increasing resources on the priorities by decreasing resources elsewhere (H137; H41; H53; L108; L155; L2; L27; L36; L39; L49; L82; L98; A124; A32; A79). Also, that the leader must be aware of addressable and non-addressable resource constraints with the leadership context as it is fundamental for reprioritising resources (H103; H149; H35; H42; L145; L20; L9; A122; A123; A160). See appendix J for additional findings.

### 10.3.5 Social stratum

When it comes to the social stratum, the results are reported displaying the confirmation overview table for each of the four groups of climates in the social stratum to introduce the climates in the group. Hence the flow will be reporting on Adaptive climates; Performance climates; Supportive climates; and Protective climates.

**Overall definition** - all climate definitions rests upon the overall definition of a climate, which was displayed for all climate factors at the top of the page in the survey with the inverted text below:

*This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here" - it comprises:*

- *the clarity of behavioural expectations (e.g. codes of conduct or policies);*
- *enactment of practices and behaviours (walking the talk);*
- *alignment between the leaders about how to behave; and,*
- *alignment between the written policies and rules and the way they are lived,*

*influencing leadership or employee work performance, or both. The stronger each of the four bullet points is; the stronger the climate is.*

*Together these shared perceptions are called the organisation's climates. A climate can be strong or weak and can be focused on different elements related to leadership.*

At the overall level, the fundamental hypotheses that organisational climates hold causal powers and can be strengthened were confirmed through the confirmation of the underlying hypothesis for the different climates, see table 67.

**Table 67. Hypothesis confirmation overview, Social stratum, Climates overall**

Definition	Organisational climates can <u>help or hinder</u> either <u>leadership or work performance</u> , or both.	Organisational climates can be <u>strengthened through leadership interventions</u> influencing the expectations, enactment, alignment, and agreement related to climate-relevant behaviour and practices.
Organisational climates	H <sub>32</sub> : ✓ 1	H <sub>33</sub> : ✓ 1

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.5.1 The Group of Adaptive climates

The six hypotheses in the group of Adaptive climates arrived at a consensus in round 1, see table 68.

**Table 68. Hypothesis confirmation overview, Social stratum, Adaptive climates**

Definition	The climate can <u>help</u> or <u>hinder</u> either <u>leadership</u> or <u>work performance</u> , or both.	The climate can be <u>strengthened through leadership interventions</u> .
Climate for exploitative learning	H <sub>34</sub> : ✓ 1	H <sub>35</sub> : ✓ 1
Climate for explorative learning	H <sub>36</sub> : ✓ 1	H <sub>37</sub> : ✓ 1
Climate for change	H <sub>38</sub> : ✓ 1	H <sub>39</sub> : ✓ 1

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.5.2 Factor: The Climate for exploitative learning

**Definition:** See climate definition... when it comes to learning to refine, develop, improve and extend existing operation continuously.

**H<sub>34</sub>:** The climate for exploitative learning can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>34</sub> was confirmed (L:93%; HR:91%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:**

The comments highlighted that a strong climate increases the efficiency of work performance through continuous attention to and implementation of incremental optimisations (L113; A74; A68; A31; L36; L140; L105). It supports leadership when the hunt for optimisation becomes embedded in the organisational functioning; both with performance improvements and as 'an extremely powerful way to motivate' (A31; A96; L41). Conversely, a strong climate for exploitative learning can result in dysfunctionalities leaving no room for mistakes or experimenting resulting in unhealthy risk averseness; low engagement; and higher stress levels from the pressure to improve (A84; H42; H98). See appendix J for additional findings.

**H<sub>35</sub>:** The climate for exploitative learning can be strengthened through leadership interventions.

**Round 1:** H<sub>35</sub> was confirmed (L:98%; HR:100%; Aca:97%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The climate for exploitative learning can be strengthened by a high level of formalisation as a driver for consistent repetition, improving expectation- and alignment-based strength (L125; L113; L57). Also, the leader's attention to allocating time for and implementing recurring practices for continuous improvements, deriving lessons learned, analysing these and implementing updates of documentation and behaviour; increases the strength of the climate (H35; L27; A68; A96; L105; L58; L27; L107; L109). Besides facilitating that the practice takes place in the organisation, role modelling the continuous improvement practice and mindset strengthens the climate (A96; L49; L58; L43; L82; A27; H83; H10; H116; L57; L108). See appendix J for additional findings.

***10.3.5.3 Factor: The Climate for explorative learning***

***Definition:*** See climate definition ... when it comes to learning to create future business practices through innovation and experimentation; by applying new competencies, technologies and ways of working.

**H<sub>36</sub>:** The climate for explorative learning can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>36</sub> was confirmed (L:94; HR:90%; Aca:100%) and not included in round 2.

***Comments from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments specified that a strong climate for explorative learning increases creativity, idea generation, experimentation, learning and innovation (H35; A74; A48; A123). In turn, successful innovation positively influences the business's competitiveness and growth (L82; A74; H35). The promotion of a climate for explorative learning needs to reflect the requisite demands from the industry and the company's strategy as experimenting is not conducive if the competitive edge stems from exploitative work performance (H144; H92; A31). Moreover, a strong climate for explorative learning demands allocation of time, attention and resources which can influence short-term optimisation negatively; incur task conflicts between exploitative short-term operational tasks; and create difficulties with carving out time for explorative activities (L109; A68; A123; A127; H98).

**H<sub>37</sub>:** The climate for explorative learning can be strengthened through leadership interventions.

**Round 1:** H<sub>37</sub> was confirmed (L:98%; HR:98%; Aca:100%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The leader's and top-down leaders' role modelling are important. The climate is strengthened when the leaders assume long-term perspectives; participate in discussing new ideas; encourage and support experimentation; and celebrate learning (A68; A48; H35; L107; L82; L121; H83; A160; H42; H98; L20; L125). In an environment with running operation (exploitative performance) a prerequisite for strengthening the climate for explorative learning can be interventions securing dedication of resources, time and attention to explorative activities, in conjunction with separating them from the exploitative mechanisms (H92; A127; H135; L43). See appendix J for additional findings.

***10.3.5.4 Factor: The Climate for change***

***Definition:*** See climate definition ...when it comes to shifting between exploration and exploitation; adapting to externally imposed change; or, participating in internally driven change.

**H<sub>38</sub>:** The climate for change can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>38</sub> was confirmed (L:94%; HR:92%; Aca:97%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments elaborated that a strong climate for change includes a positive and 'can do' attitude and willingness to changing habits and acquiring new skills (L107; L108). In turn, the willingness to change is exchanged into a faster and more efficient change of behaviours, ways of working, and more efficient learning and acquisition of skills (L107; L125; A68; L108). A strong climate for change contributes to organisational agility and resilience, which builds competitive capacity, which is especially important when competing in industries with high external dynamism (L140; L43; L200). Conversely, a weak climate for change can result in non-productive change reactions like the slow adaptation of new habits; anxiety; saying yes but doing nothing; questioning the need for change; which in turn, can lead to a lack of operational focus and lower performance; unintended staff attrition; and, slower or incomplete transformations (A96; A123; H42; H98; L125; L43). See appendix J for additional findings.

**H<sub>39</sub>:** The climate for change can be strengthened through leadership interventions.

**Round 1:** H<sub>39</sub> was confirmed (L:94%; HR:98%; Aca:90%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The climate can be strengthened through repeatedly communicating the purpose of upcoming or ongoing change in conjunction with highlighting elements from successful past transformations, which instils belief and allows the followers to make sense of imposed or self-imposed change demands (L200; A123; A84; H42; H123; L57). Educating organisational members to understand change reactions and coping with change and accepting differences in learning approaches is another significant contributor to a strong climate for change (H83; H123; L9; L107; H59). Moreover, recurringly involving people in interpreting change needs and deciding about responses builds agility and change readiness. This long-term involvement leveraging 'minor changes' sensitises staff to 'constant change' resulting in a stronger climate for change, which in turn, prepares the organisation to handle major changes (H101; L200; A84; H124; L43; L108). See appendix J for additional findings.

### 10.3.5.5 The Group of Performance climates

Out of the six hypotheses in the group of Performance climates, four reached consensus in round 1, see table 69.

**Table 69. Hypothesis confirmation overview, Social stratum, Performance climates**

Definition	The climate can <u>help</u> or <u>hinder</u> either <u>leadership</u> or <u>work performance</u> , or both.	The climate can be <u>strengthened through leadership interventions</u> .
Climate for diligence and discipline	H <sub>40</sub> : ✓ 1	H <sub>41</sub> : ✓ 1
Climate for goal-path clarity and stretch	H <sub>42</sub> : ✓ 1	H <sub>43</sub> : ✓ 1
Climate for service	H <sub>44</sub> : ✓ 2	H <sub>45</sub> : ✓ 2

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

#### 10.3.5.6 Factor: *The Climate for diligence and discipline*

**Definition:** See climate definition ... when it comes to meeting expectations; delivering on commitments; holding each other accountable; and, diligently complying with standards.

**H<sub>40</sub>:** The climate for diligence and discipline can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>40</sub> was confirmed (L:95%; HR:90%; Aca:93%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** Diligently complying with standards and holding each other accountable on commitments are hallmarks of a strong climate for diligence and discipline resulting in consistency, predictability, control, alignment and ultimately performance (L200; L105; A122; L49; L140). Role clarity and clear accountabilities throughout the organisation and a climate where accountability is enforced increase the precision and speed in the organisational functioning making it 'play like an orchestra together' (L92; L109; L49; L82). Hence, a strong climate contributes to organisational trust because expectations are clear, and agreements are held (L92; L43; L27). Conversely, a strong climate of diligence and discipline can undermine self-directed initiative, bring down engagement and be perceived as distrust by competent employees if the climate is enforced in an overly directive and non-involving style (A123; A160; A96; H42). Another negative consequence of a strong climate for diligence and discipline can be less divergent thinking, less creativity and innovation, and less speed due to strictness in following protocols not fully fit for purpose (H144; L108; A127).

**H<sub>41</sub>:** The climate for diligence and discipline can be strengthened through leadership interventions.

**Round 1:** H<sub>41</sub> was confirmed (L:96%; HR:93%; Aca:93%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** An integral part of strengthening this climate, is consistent, routinised disciplined leadership follow-up, reinforcing and corrective actions – the leader must set and enact the standard (L105; L200; H98; L125; A74; A115; H83; H116; L20; L107; L57). Also, decisively handling misconduct with a constructive approach and punishing counterproductive work behaviour; is a part of the effective leader intervention range (H98; L121).



Leading through clear commitments and holding each other accountable to these commitments strengthens the climate, and results in increased performance (L82; A31; L109; L121). Finally, to make it clear where disciplined alignment is needed and where autonomy should rule to promote performance best is imperative for the leader to reap the benefits of a strong climate for diligence and discipline without incurring complacency (L200; A123; A31; A160). See appendix J for additional findings.

#### *10.3.5.7 Factor: The Climate for goal-path clarity and stretch*

**Definition:** See climate definition ... when it comes to goals, paths, and goal-path linkages; continuously improving our professional mastery; and, stretching ambitions always to perform better.

**H<sub>42</sub>:** The climate for goal-path clarity and stretch can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>42</sub> was confirmed (L:96%; HR:80%; Aca:84%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** Clear goals and an understanding of which contributions are most important for delivering the goals is a key performance and motivation driver; allows informed decisions; and it helps understand when competing priorities should be escalated (L105; H116; A124; H68; L1; A74; L20). Also, shared goals and accountabilities in teams and across functions are strong organisational performance drivers contributing to coordinated actions and synergies (L20; L200). On the other hand, unclear goals and shifting or competing priorities impedes performance and leads to confusion about resource allocation; time spent on clarifying goals; and less trust in higher-level leaders (L125; A123; L200; H92; H42). Also, too aggressive goal setting can result in stress, burnout and disbelief; whereas too unaggressive goal setting can be demotivating – it is about striking a motivating ‘stretch’ with ambitious, yet realistic goals fit for organisational purpose and team/individual efficacy (A96; H42; L125; L201). See appendix J for additional findings.

**H<sub>43</sub>:** The climate for goal-path clarity and stretch can be strengthened through leadership interventions.

**Round 1:** H<sub>43</sub> was confirmed (L:96%; HR:83%; Aca:87%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The comments indicate that there is a recurring sequence in establishing a strong climate for goal-path clarity and stretch. Firstly, goals need to be clearly set and interpreted together with the ones who are to deliver so that goals are jointly understood in context as tangible, measurable, and time-bound 'desired results', 'future state', or 'clear tangible outcomes' (A96; A123; H98). Secondly, establishing a clear and understood line of sight between the goals, the related team and individual efforts, and recurrently reviewing this means-ends performance to improve the effort-goal attainment links is a key driver (A160; H83; L200). Thirdly, ensuring that team and individual goals are linked to the organisations vision and purpose, as understanding own contributions and why you are being held accountable in the 'bigger picture' is a strong motivating factor tapping into the individual need to have a meaningful job (A96; L20; L109; L27; A2; H123). See appendix J for additional findings.

**10.3.5.8 Factor: The Climate for service**

**Definition:** See climate definition ... when it comes to serving our customers to create positive customer experiences; and to restore negative customer experiences.

**H<sub>44</sub>:** The climate for service can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>44</sub> was confirmed in the Leader and Academic panels (L:88%; Aca:90%). See table 70. However, despite meeting the agreement threshold in the HR Panel (HR:78%), the HR Panel displayed an IQR of 1.25. The Kruskal-Wallis H test revealed a significant difference among panels (H:.009). The follow-up Mann-Whitney U test comparing panels pairwise revealed that the HR Panel distribution differed from the other two panels (Lea:Aca, U:.745; HR:Aca, U:.019; HR:Lea, U:.005). Naturally, as part of the difference in distributions, the HR Panel came out with a lower median of 4,00, reflecting the higher number of panellists choosing A to SA than the other two panels. Together it highlighted that the HR Panel viewed the hypothesis differently than the other two panels. To investigate the different HR distribution, the hypothesis was included for the HR Panel in round 2.

Table 70. Delphi results Climate for service - help/hinder		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	5,00	4,00	5,00	4,00
	Mode	5	4	5	4
	IQR	1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		2	1	0	1
		4%	2%	0%	3%
Neither agree nor disagree (N)		4	6	3	2
		9%	15%	10%	5%
Agree (A)		13	21	11	19
		28%	51%	37%	51%
Strongly agree (SA)		28	11	16	14
		60%	27%	53%	38%
Total judgements		47	41	30	36
Do not know (2) or missing (1)		0	2/0	0/1	1/0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** In purpose-driven industries, such as healthcare or education, the service climate helps performance through 'obsession' about understanding customer/patient/user expectations; designing services; and, subsequent user-centricity in performance to meet these service expectations (A96; H135; H124; L105; L125). Such a strong service climate can help leadership by empowering employee behaviours also when not directly supervised (L92; A96). Without a service climate ensuring a continuous delivery of a service level meeting the customer expectations in the industry, the performance will suffer (L36; H124; H98; L4). Conversely, there are indications that the service climate must be balanced. An overly strong focus on serving the clients can hinder performance by 'stealing' time and attention from core tasks to respond to all client requests, and it can become an excuse used to get things prioritised (H98; L109).

**Round 2:** H<sub>44</sub> was confirmed for the HR Panel (HR:89%) with an IQR of 1.00 and a similar distribution as the other panels. The comments revolve around how customer-centricity helps work performance by focusing efforts and influencing how users, patients and customer are met; and that the climate helps leadership by providing purpose and motivation (H10; H103; H116; H135; H21; H66).

Also, it is commented that to avoid the hindering effects of doing everything for the customers in the name of providing good service; the climate needs to be balanced with clear scoping about the service degree expected (H98; H81; H103).

**H<sub>45</sub>:** The climate for service can be strengthened through leadership interventions.

**Round 1:** H<sub>45</sub> was confirmed (L:94%; HR:83%; Aca:94%). See table 71 below. However, despite meeting the agreement threshold in all panels, the Kruskal-Wallis H test revealed a significant difference among panels (H:.044). The follow-up Mann-Whitney U test comparing panels pairwise revealed that again the HR Panel distribution differed from the other two panels (Lea:Aca, U:.950; HR:Aca, U:.046; HR:Lea, U:.028). Once again, the differences in distribution indicated that the HR Panel viewed the hypothesis differently than the other two panels. To investigate, the hypothesis was included for the HR Panel in round 2.

Table 71. Delphi results Climate for service - strengthened		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	5,00	4,00	5,00	4,00
	Mode	5	5	5	5
	IQR	1,00	1,00	0,50	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		1	1	0	1
		2%	2%	0%	3%
Neither agree nor disagree (N)		2	5	2	2
		4%	12%	7%	5%
Agree (A)		13	16	8	16
		28%	39%	27%	43%
Strongly agree (SA)		31	18	20	18
		66%	44%	67%	49%
Total judgements		47	41	30	37
Do not know (1) or missing (1)		0	1/0	0/1	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The qualitative analysis pointed to how climate can be strengthened and gave insights into how the force field can make it difficult to strengthen. A strong climate for service helps create followership when the leader role models by 'showing the way' and 'setting the tone' about how to serve customers; decides with a customer focus and puts the customer at the core of sense giving (A123; L125; A27; H83; A160; L107; L57; L58). The service climate can be strengthened when a leader cares about the employee's encounters with customers; have 'the finger on the pulse' and display the sense of urgency in reacting to customer requests and complaints; hire for service attitude; educate in service behaviour; secure a 'voice of the customer', e.g. through surveys or panels; and, engage customers and employees in 'lessons learned' to drive continuous improvement (A124; L82; L117; L27; H83; H81; L108). In continuation, the service climate is closely connected to the climate for collaboration because the way we treat each other will reflect itself in how we treat customers (L143; A124; A115). As a basis for a strong service climate, it is important to establish clear service expectations by defining how the organisation wants customers to be treated; align methods and practices to support the service ambition; and train employees in the why, what and how (A96; L200; H123). However, it can be difficult to create a strong service climate and enhance customer focus if the organisation is not delivering on its material core promises or if other parts of the system counterbalance it, such as internally focused procedures or when the sight of the customer in resource allocation is lost (H42; A74; L57).

***Round 2:*** H<sub>45</sub> was confirmed for the HR Panel (92%) coming close to the other panels' levels in round one (L:94%; Aca:94%). Moreover, the Kruskal-Wallis H test displayed no differences in distribution between the HR Panel's round two distribution and the round one distributions from the HR and Academic Panels (H:.450). The comments from the HR Panellists in round two concerned one key finding. That is, the importance of having the leader and champions role model the desired service behaviour which was emphasised by all the panellists leaving remarks about strengthening the climate (H120; H21; H137; H41; H66; H83).

### 10.3.5.9 The Group of Supportive climates

Out of the eight hypotheses in the group of Supportive climates, four reached consensus in round 1, see table 72.

**Table 72. Hypothesis confirmation overview, Social stratum, Supportive climates**

Definition	The climate can <u>help</u> or <u>hinder</u> either <u>leadership</u> or <u>work performance</u> , or both.	The climate can be <u>strengthened through leadership interventions</u> .
Climate for collaboration	H <sub>46</sub> : ✓ 1	H <sub>47</sub> : ✓ 1
Climate for productive discussions	H <sub>48</sub> : ✓ 1	H <sub>49</sub> : ✓ 1
Climate for fairness and justice	H <sub>50</sub> : ✓ 2	H <sub>51</sub> : ✓ 2
Climate for empowerment	H <sub>52</sub> : ✓ 2	H <sub>53</sub> : ✓ 2

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.5.10 Factor: The Climate for collaboration

**Definition:** See climate definition ... when it comes to collaborating well, acting from a common ground; trusting each other; feeling safe in the group; being open to other views; accepting each other; building good relations; and, helping and backing each other up.

**H<sub>46</sub>:** The climate for collaboration can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>46</sub> was confirmed (L:96%; HR98%; Aca:96%), arriving at a median of 5,00 in each of the three panels, and was not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** The panellists commented that a centrepiece in a strong climate for collaboration is high-quality relations between team members and between the leader and each follower, which in turn, has a positive influence on trust, motivation; cooperation; handling risk intensity; initiative; and productivity (L43; H41; H53; A124; A2).

Along with strong relationships, a strong climate for collaboration encompasses understanding how the task-related activities run; that is, a joint operational awareness about how the company operates to deliver and the interdependencies which follow (H98; L49; A123). Also, an awareness of how to collaborate and navigate in the organisation, i.e., whom to involve how and when, is a part of the climate for collaboration, resulting in better coordination; faster outputs and a system that 'can work smoothly' (H98; A123; A96; H116). When the high relationship quality acts in concert with a strong common ground it results in a jointly perceived cohesiveness, which in turn, drives a positive peer performance pressure; a higher propensity to participate actively; to offer help; suggest better ways; learn from mistakes; solicit and ask for feedback and second opinions (L43; H92; L41; L92). The other way around, a low trust climate for collaboration can result in withdrawal behaviour; poor collaboration; lower ownership for deliverables; not taking necessary actions due to fear of not being backed up; or staff attrition (L108; L43; A124; H41; A74). See appendix J for additional findings.

**H<sub>47</sub>:** The climate for collaboration can be strengthened through leadership interventions.

**Round 1:** H<sub>47</sub> was confirmed (L:93%; HR97%; Aca:97%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** The comments underline that the leader can influence the climate for collaboration massively (H123; H35; H83; L82; L108; A124). When a leader invites diverse perspectives, listens actively, and uses the input for deciding along with setting the 'inclusive' tone to promote participative safety it results in people daring to call out misbehaviour or performance issues; 'speak truth'; investigate errors without blame; and, experiment and innovate (L109; A96; H42; L125; H53; A115; L108; A27; A160; L105). In continuation, the common ground pertaining to collaboration can be strengthened when a leader brings people together and establishes, interprets, and obligates mutual collaboration ground rules, thus facilitating that trust evolves (L58; L125; H98; A31). Moreover, involving in deciding how and sense-giving around demands for collaboration is vital for ascribing meaning to any extra effort incurred by 'having to collaborate' when a team or an individual does not see the benefit of collaboration (A123; L20; L125). See appendix J for additional findings.

#### *10.3.5.11 Factor: The Climate for productive discussions*

**Definition:** See climate definition ...when it comes to engaging in productive discussions and constructive conflict to promote divergent thinking in problem-solving; qualify decision making; or, to align and create common ground.

**H<sub>48</sub>:** The climate for productive discussions can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>48</sub> was confirmed (L:96%; HR95%; Aca:93%) with a median of 5,00 across the panels and was not included in round 2.

#### ***Excerpt from the round 1 qualitative analysis confirming the definition and***

**hypothesis:** The panels found that a strong climate for productive discussions increases the ability to handle external risk, complexity, and ambiguity; it improves performance; qualifies decision making; and it promotes continuous improvement when the team recurrently engage in healthy case-focused discussion about problems and opportunities to improve (L109; H42; A123; A96; L4; H10; H98). From the hindering perspective, a weak climate for productive discussions can manifest itself as complacency, groupthink or excessive politeness flowing from prevailing mental models, which, in turn, incurs a risk of unqualified decisions and path dependency (L82; H10; L109; H53). Conversely, a strong climate for (un)productive discussions polluted by a propensity to challenge everything as a purpose in itself can lead to slow reactions or even paralysis; path dependency; or conflict seeking behaviour (A127; L109; H98). See appendix J for additional findings.

**H<sub>49</sub>:** The climate for productive discussions can be strengthened through leadership interventions.

**Round 1:** H<sub>49</sub> was confirmed (L:94%; HR90%; Aca:90%) and not included in round 2.

#### ***Excerpt from the round 1 qualitative analysis confirming the definition and***

**hypothesis:** The analysis showed that an important foundation for creating a strong climate for productive discussion is clarifying the purpose and framing of seeking differing perspectives; questioning assumptions; challenging status quo or applying non-traditional thinking (A31; L105; A127; H42). Given such purposeful framing the climate for productive discussion will be strengthened by structuring meetings to support it and actively facilitating that differing perspectives are voiced and listened to as it taps into the 'collective wisdom' of the team resulting in more and better qualified options (A124; H101; A27; L105; L49; L140).



Also, the leader should role model a practice of constructive and respectful 'courageous conversations' to surface and benefit from divergent thinking (A122; A160; H83; L125; L41; L58; L200). See appendix J for additional findings.

#### 10.3.5.12 Factor: The Climate for fairness and justice

**Definition:** See climate definition ...when it comes to the fairness of rules, regulations, policies and procedures and their application; the fairness of the judgements and decisions made by leaders; and, fairness in the distribution of resources, rewards and sanctions.

**H<sub>50</sub>:** The climate for fairness and justice can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>50</sub> was confirmed in the Leader and Academic panels (L:91%; Aca:90%) and not included in round 2. However, interestingly the HR Panel came out with an IQR of 1.25 and an agreement for SA and A scores of 78%. Seven out of 41 HR panellists responded N and two disagreed. To learn more from the HR Panel, the factor was included in round 2 for HR. See table 73 below.

Table 73. Delphi results Climate for fairness - help/hinder		Round 1			Round 2
		Lea	HR	Aca	HR
Median		5,00	4,00	5,00	5,00
Mode		5	5	5	5
IQR		1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)	Count	2	2	1	0
		4%	5%	3%	0%
Neither agree nor disagree (N)	Count	2	7	2	2
		4%	17%	7%	5%
Agree (A)	Count	18	12	9	16
		38%	29%	30%	43%
Strongly agree (SA)	Count	25	20	18	19
		53%	49%	60%	52%
Total judgements		47	41	30	37
Do not know or missing (1)		0	0	0/1	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The comments highlighted the 'subjectivity challenge' and addressed both helping and hindering effects. A challenge when it comes to the helping and hindering effects of perceived fairness and justice is that it is influenced the subjective value system for the individual organisational member, so what is fair for one person might seem unfair for another (A123; A127; H59; L27; H98). That highlights the importance for the leader to interpret the ground rules with his people to secure aligned expectations. When the climate for fairness and justice is strong and based on merits and performance, it helps promote organisational performance. That is, when the priority first and foremost is on procedures and criteria closely linked to the organisational performance intentions; and in the second row supported by sensitivity to criteria like gender, race or similar (A96; L105; H42; H123). A weak climate for fairness and justice impairs the climate for collaboration as it destroys trust; motivation; it makes people spend energy on perceived unfairness; and it weakens the intention to stay (L58; L140; L108; H98; L92; A122). A strong climate for fairness and justice is an important component in building participative safety, which, in turn, increases productive discussions and employee engagement (H98; L20; A31). Conversely, in pursuit of equitable access to opportunities and benefits, the climate for fairness and justice can become so strong that it stifles decisions which might support performance. For example, by not being able to reward high performers or promote talent; diverting focus to the following procedure rather than producing results; avoiding conflict to treat everyone the same; or ensuring that 'everyone gets a trophy' (A123; A96; L125).

***Round 2:*** H<sub>50</sub> was confirmed for the HR Panel (95%), which cemented the agreement of 91% among the leader panellists and 90% in the Academic Panel. The HR panellists remarked that a strong climate strengthens organisational trust and reduces uncertainty, resulting in more efforts put into performing (H106; H116). However, an unfit, but strong climate pursuing equality for everyone in the name of fairness causes a lower performance and inability to retain high performers (H15; H81). What is more, a weak climate for fairness and justice can lead to cynicism, negativism, individual suboptimization and attrition of talent (H103; H104; H81). See appendix J for additional findings.

**H<sub>51</sub>**: The climate for fairness and justice can be strengthened through leadership interventions.

**Round 1**: H<sub>51</sub> was confirmed (L:89%; HR:88%; Aca:93%). See table 74 below. However, the HR Panel had five panellists answering N and a higher representation of A to SA scores than the other two panels. To provide a full picture of the two hypotheses concerning the climate for fairness and justice, the strengthening hypothesis was also included in round 2 for the HR Panel.

Table 74. Delphi results Climate for fairness - strengthened		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	5,00	4,00	5,00	4,00
	Mode	5	4	5	5
	IQR	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		3	0	1	0
		7%	0%	3%	0%
Neither agree nor disagree (N)		2	5	1	3
		4%	12%	3%	8%
Agree (A)		14	20	8	16
		30%	49%	27%	43%
Strongly agree (SA)		27	16	20	18
		59%	39%	67%	49%
Total judgements		46	41	30	37
Do not know or missing (2)		0/1	0	0/1	0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The comments concern two main drivers in strengthening the climate and one challenge in doing so. The climate for fairness and justice can be strengthened by operating from clearly expressed guidelines about who is eligible for what privileges; who has which rights and mandates; how processes run; which criteria for distributing resources and perceived benefits apply; transparent decision making; a code of conduct; and sense giving around choices and decisions (A123; A124; L200; A96; H42; H123; H81; L109). In turn, it highlights the opportunity for the leader to strengthen the climate by setting and consistently acting according to ground rules about how decisions are made; how we treat each other; and how members of the organisation acquire access to resources, benefits and opportunities (L82; H53; L121; L200; A115; L20; H42; H83; H35; H124).

However, it can be hard for a leader to change organisational habits and traditions ingrained in how the organisation operates when it comes to equal access; established procedures and the way people are treated (A74; A31).

**Round 2:** H<sub>51</sub> was reconfirmed in the HR Panel (92%) increasing the consensus percentage marginally from 88% in round one, while also shifting the mode from 4 to 5. The comments addressed that setting clear values and principles and educating people in how it translates into behaviour positively influences the climate's strength (H81). In addition, consistency in the enactment of the code was stressed as an important factor influencing the climate's strength (H103; H120; H66; H41). Finally, H15 remarked that reforming established norms for what is fair regarding rewarding performance and changing the principles can be difficult but should be considered for promoting performance.

#### 10.3.5.13 Factor: *The Climate for empowerment*

In developing the theoretical framework and the pilot, the climate for empowerment was termed as *the climate for following and sharing leadership*. In round 1 it was termed as *the climate for following*. Based on the qualitative input in conjunction with the high IQR in the Leader Panel in round 1, it was renamed *the climate for empowerment* to reflect the definition better.

**Definition:** The strength of the climate when it comes to participating constructively as a follower when being led; taking empowered action; and, acting out given responsibilities in full also when it includes influencing and guiding peers.

**H<sub>52</sub>:** The climate for empowerment can help or hinder either leadership or work performance.

**Round 1:** H<sub>52</sub> was confirmed on the agreement (Lea:74%; HR:87%; Aca:90%), but contested by the IQR in the Leader Panel. Eight leaders out of 47 responded N and two leaders did not know; in conjunction with two leaders who disagreed it resulted in an IQR of 2,00. The factor was included for the Leader Panel in round 2 as the two other panels reached consensus and met the IQR criteria. See table 75 on the next page. The renaming was introduced to the Leader Panel in round 2 with the following introduction: *“Based on the qualitative input provided in round one, this factor has been renamed from the climate for following to the climate for empowerment to reflect the definition better.”*

Table 75. Delphi results Climate for empowerment - help/hinder		Round 1			Round 2
		Lea	HR	Aca	Lea
Median		4,00	4,00	4,00	5,00
Mode		5	5	5	5
IQR		2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		2	2	0	1
		4%	5%	0%	2%
Neither agree nor disagree (N)		8	3	3	0
		17%	7%	10%	0%
Agree (A)		15	17	13	20
		32%	41%	43%	47%
Strongly agree (SA)		20	19	14	22
		43%	46%	47%	51%
Total judgements		47	41	30	43
Do not know (2) or missing		2/0	0	0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** It is key for a leader to build a strong climate for empowerment as distributed informed decision making and action are desired outcomes of leadership positively influencing performance (H59; L58; L125; L200; H53; A27; L108; A31; L142). A strong climate for empowerment helps informed decision making close to the root causes and information sources; it increases response speed; increases accountability; and reduces vulnerability by building distributed competences (A31; H68; H42; L105). The climate for empowerment helps performance in teams with high expertise as their ability to take informed action and expectations to be allowed goes hand in hand (A31). A weak climate for empowerment can hinder performance and make people withdraw. It can result in that capable people leave; demotivate people because they are not given a chance to use their competences and take responsibility; or make reports 'sit back' waiting for decisions because they are used to not being obligated to take responsibility (L20; H42; L200; A124). Conversely, a strong climate for empowerment can complicate leadership through the expectations concerning involvement; less control due to autonomy; increased investment in coordination; and decreasing alignment (L57; L143; L117). Together it indicates the importance for the leader to understand how the organisational functioning is best supported with alignment or empowered autonomy in the different parts of the leadership context (A96; A31).

**Round 2:** H<sub>52</sub> was confirmed. The Leader Panel moved from a consensus level of 74% in round one to 98% in round 2, while also moving the IQR from 2.00 to 1.00. See table 75 above. Seven remarks from leader panellists confirmed that a strong climate for empowerment positively influences work performance (L2; L36; L43; L44; L57; L73; L98). See appendix J for additional findings.

**H<sub>53</sub>:** The climate for empowerment can be strengthened through leadership interventions.

**Round 1:** H<sub>53</sub> reached agreement levels above the threshold in round one (L:74%; HR:86%; Aca:90%). However, it was contested by the spread in the Leader Panel with an IQR of 2.00. See table 76 below. Interestingly three leaders answered 'Do not know', and seven leaders responded N. To learn more, the factor was included in the Leader Panel for round 2.

Table 76. Delphi results Climate for empowerment - strengthened		Round 1			Round 2
		Lea	HR	Aca	Lea
	Median	4,00	5,00	5,00	5,00
	Mode	5	5	5	5
	IQR	2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		2	1	0	1
		4%	2%	0%	2%
Neither agree nor disagree (N)		7	5	3	0
		15%	12%	10%	0%
Agree (A)		17	13	10	20
		36%	32%	33%	47%
Strongly agree (SA)		18	22	17	22
		38%	54%	57%	51%
Total judgements		47	41	30	43
Do not know (3) or missing		3/0	0	0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The leader can strengthen the climate for empowerment by involving the team in decision making and productive discussions, thereby educating them and enabling delegation of mandate to decide and act. In conjunction, the leader must make herself available for clarification and troubleshooting; hire people who thrive taking responsibility; oblige members to fulfil the mandates delegated; develop active followership to co-create leadership; and create participative safety around making mistakes (H98; H53; H116; L142; A124; H83; A160; H35). There are factors which intensify the importance of distributed informed initiative, for example when a team collaborates over the distance (L43; L40); when the external complexity is high (H101; H42; L27); or dynamism goes up (A130; L36; L9; L107). However, balancing these helping effects of an empowerment climate; there can be critical areas or situations where the leader should maintain control and mandate to secure fast coordinated response, i.e. emphasise efficient reactive followership (H98; A27; A74), e.g. firefighting, or in an emergency room. The climate for empowerment is reinforced by a strong climate for goal-path clarity and stretch, giving the organisational members a better foundation for informed actions (H116; L108). The strength with which a leader can create a climate for empowerment is influenced by the national culture among the members and the leader's values. More hierarchical values make it harder, while more egalitarian cultures make it easier to develop a strong climate for empowerment (L57; L4; A130).

***Round 2:*** H<sub>53</sub> was confirmed. The Leader Panel results display a pattern resembling the previous hypothesis moving the consensus to 98% with an IQR of 1.00. See table 76 above. The comments from the Leader panellists added a few further nuances to the summary from round one. For example, strengthening the climate for empowerment depends on the clarity of direction and scoping the desired outcomes to secure coordination through output alignment and coordination, while leaving the empowered freedom about the 'how' to the followers (L36; L44; L73). See appendix J for additional findings.

#### *10.3.5.14 The Group of Protective climates*

Out of the six hypotheses in the group of Protective climates, three reached consensus in round 1, see table 77. The hypothesis on the climate for sustainability remains contested, also after round 2.

**Table 77. Hypothesis confirmation overview, Social stratum, Protective climates**

Definition	The climate can <u>help</u> or <u>hinder</u> either <u>leadership</u> or <u>work performance</u> , or both.	The climate can be <u>strengthened through leadership interventions</u> .
Climate for safety	H <sub>54</sub> : ✓ 2	H <sub>55</sub> : ✓ 1
Climate for ethical conduct	H <sub>56</sub> : ✓ 1	H <sub>57</sub> : ✓ 1
Climate for sustainability	H <sub>58</sub> : ? 2	H <sub>59</sub> : ✓ 2

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.5.15 Factor: The Climate for safety

**Definition:** See climate definition ...when it comes to physical safety; the assessment of work hazards and threats; the risk avoidance; the risk acceptance; the preventive protection; and, the reactive safety responses.

**H<sub>54</sub>:** The climate for safety can help or hinder either leadership or work performance.

**Round 1:** H<sub>54</sub> was confirmed (L:79%; HR:95%; Aca:93%); however, the Leader Panel assessed the hypothesis concerning the climate for safety differently from the HR and Academic panels with a lower agreement level and an IQR of 2.00. Hence, the factor was included in round 2 for the Leader Panel. See table 78 below.

Table 78. Delphi results Climate for safety - help/hinder		Round 1			Round 2
		Lea	HR	Aca	Lea
	Median	4,00	4,00	4,00	4,00
	Mode	4	5	4	4
	IQR	2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	0	0
		2%	0%	0%	0%
Disagree (D)		4	1	0	0
		9%	2%	0%	0%
Neither agree nor disagree (N)		4	5	2	0
		9%	12%	7%	0%
Agree (A)		22	16	15	23
		47%	39%	50%	53%
Strongly agree (SA)		15	19	13	20
		32%	46%	43%	47%
Total judgements		47	41	30	43
Do not know (1) or missing		1/0	0	0	0



***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** Several comments expressing doubt whether the climate for safety encompasses both physical and psychological safety (H124; H98; A48; A68) led to an update of the definition by adding (underlined) “...*when it comes to physical safety; the assessment of work hazards and threats...*” to better reflect the focus warranted in the theoretical framework. The necessary strength of the climate for safety is directly linked to the industry's risk intensity (L36; A123; H144; A127). Risk intensity leading to occupational hazards that threatens the employee's safety, the leader, and the organisational infrastructure or facilities can hinder performance (A123; A2; L105). A weak safety climate can intensify these effects by raising anxiety levels; creating unclear risk tolerances; leading to reckless behaviour, resulting in more errors and accidents; and making people leave (A84; A123; A127; A123; L105; L92). Conversely, a strong safety climate can help leadership by guiding and encouraging informed actions among the members in the organisation; increase retention; and protect employees through peer interventions (L109; A2; H98; L92; L43; A122). Nevertheless, there are also potential hindering effects of a strong safety climate if it keeps people from taking necessary action with an informed risk acceptance mindset, i.e. ‘playing not to lose’; leads to the retrenchment of ideas; or strict following of bureaucratic rules (A127; A160; H53; L82; L2; A31, A123).

***Round 2:*** H<sub>54</sub> was confirmed in the Leader Panel (L:100%) with an IQR of 1.00. The panellists remarked on the effect of having a strong climate for safety is clarity of guidance for employees to take reasonable risks. In turn, allowing them to focus energy on performing as the expectations and enactment regarding boundaries for taking risk are well established (L109; L125; L139; L155; L43; L84). In continuation, a strong climate enacted by the leader makes people feel safe and builds trust resulting in higher propensity to perform extra-role efforts (L145; L2; L57; L98). As feeling safe is a basic need a lack of a base level safety from threats will also impair in-role performance (L36; L39; L4). Hence, creating a sufficiently strong safety climate is a crucial leadership task fundamental for developing performance (L55; L82).

**H<sub>55</sub>:** The climate for safety can be strengthened through leadership interventions.

**Round 1:** H<sub>55</sub> was confirmed (L:89%; HR:90%; Aca:96%) and not included in round 2.

***Comments from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** An important driver in strengthening the climate for safety is developing capabilities in recognising risks and hazards; accepting their presence and translating this into appropriate measures (H53; L109; L82). Hence, the leader can strengthen the climate for safety through sense-giving about the character, presence and probability of risk; the awareness about preventive measures; the contingency response plans; the attitudes around necessary and accepted risk-taking; and the expectations to risk mitigation (A123; H53; L200). This manner of engaging in sense-making with the team drives foresight, insight and ability to navigate the 'safe to fail zone' for the team (L109; L125; A84; A127), i.e. creates a commitment-based safety climate. An important preceding foundation is the policies, procedures, instructions, code of conduct and related training (L27; H42). On this foundation, rehearsing risk handling; drawing attention to the boundaries of risk-taking; maintaining focus on compliance; and, securing no-blame error and near-miss reporting are leadership interventions strengthening the climate for safety (L107; H35; L43; A31; H53). Related both to the commitment-based and the compliance-based safety climate role modelling from the top of the organisation and among the leaders is imperative for the emergence of a strong safety climate (L43; L125; H123; L41; L57; L200).

***10.3.5.16 Factor: The Climate for ethical conduct***

***Definition:*** See climate definition ...when it comes to loyally enacting the company's ethical code; behaving ethically; promoting ethical conduct to peers; and making ethical decisions.

**H<sub>56</sub>:** The climate for ethical conduct can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>56</sub> was confirmed (L:83%; HR:85%; Aca:93%) with a mode of 5 in each of the three panels and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** Clarity about the company's ethical code and consistency in judgements and actions followed by explaining the choices in moral intensive decisions further builds the leaders credibility, which in turn, positively influences organisational commitment (L92; L109; L27; H59).

The hindering effects of a weak climate for ethical conduct can be a higher level of fraud; abuse; corruption; disbelief resulting in lower performance; and it can pose a threat to the company's image and possibilities to acquire the necessary talent (A2; A123; A124; A96; L107; L92). See appendix J for additional findings.

**H<sub>57</sub>:** The climate for ethical conduct can be strengthened through leadership interventions.

**Round 1:** H<sub>57</sub> was confirmed (L:94%; HR:96%; Aca:93%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** It is when a role model, leader or significant peer, upholds the ethical principles and does not cut corners or bend the ethical code in pursuit of results that the climate for ethical conduct is strengthened (A123; L121; H98; H144; L125; L82). Standing the test in difficult dilemmas and moral intensive situations followed by explaining the decisions and ethical considerations; and, engaging in pro-active sense-making with the team who can face moral intensity are both pathways to strengthening the climate (A123; L139; A115; A27). It is a long-term effort to build a strong climate for ethical conduct (A2; H124) and an important measure in maintaining and strengthening the ethical climate is for the leader to take the necessary consequences when someone violates the ethical code (H98; L109; A27; L105). See appendix J for additional findings.

***10.3.5.17 Factor: The Climate for sustainability***

***Definition:*** See climate definition ... when it comes to loyally enacting the company's sustainability code; acting sustainably; promoting sustainability to internal and external stakeholders; and, making sustainable decisions.

**H<sub>58</sub>:** The climate for sustainability can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>58</sub> was contested in the Leader Panel in round 1 (L:45%; IQR:2.00) and the HR Panel (HR:56%), while confirmed in the Academic Panel (Aca:73%). See table 79 below. There were 27 panellists across the leader and HR panels answering N, which indicate less clear causal effects than some of the other climates. Also, the relevance of further investigating differences was confirmed by the Kruskal-Wallis H test (H:.031), and subsequently by the Mann-Whitney U-tests (Lea:Aca, U:.012; HR:Aca, U:.090; HR:Lea, U:.235).

These tests displayed significant differences in the distributions between the leader and academics panels. It was decided to include the factor in round 2 for all panels to learn more, and because the factor is less warranted in the reviewed literature, see the theoretical framework.

Table 79. Delphi results Climate for sustainability - help/hinder	Round 1			Round 2			
	Lea	HR	Aca	Lea	HR	Aca	
Median	3,00	4,00	4,00	4,00	4,00	4,00	
Mode	3	4	4	4	4	4	
IQR	2,00	1,00	1,00	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0	1	0	0
		0%	0%	0%	2%	0%	0%
Disagree (D)	Count	9	4	3	5	2	2
		20%	10%	10%	12%	5%	7%
Neither agree nor disagree (N)	Count	14	13	5	10	12	3
		30%	33%	17%	23%	32%	10%
Agree (A)	Count	13	15	11	17	18	13
		28%	38%	37%	39%	49%	45%
Strongly agree (SA)	Count	8	7	11	8	5	11
		17%	18%	37%	19%	14%	38%
Total judgements		46	39	30	41	37	29
Do not know (2) or missing (4)		2/1	0/2	0/1	2/0	0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The climate for sustainability concerns embedding criteria for decisions and actions which bring about good environmental and social impacts; promote the company image; meet customer expectations and industry standards; and contribute to a better world. Whilst it is important, it has less of an immediate and direct helping or hindering impact on leadership and work performance (A74; A123; A127; H42; H116). However, focus on sustainability, environmental impact, and corporate social responsibility is becoming increasingly important for many companies due to requisite demands from customers and society. In this sense, it can help motivation; sense-making; building pride in doing good; attracting, recruiting and retaining talent for the people where the sustainability agenda aligns well with their values (A160; A96; H42; L105; H35; L108; L92). On the other hand, a strong climate for sustainability can hinder leadership and work performance by introducing competing priorities that must be balanced, that is, to which level should the social or environmental impact weigh in compared to meeting financial performance criteria (H98; L109; L200).

Another hindering effect is if employees experience that the sustainability agenda is only external PR rather than lived internally, as this 'lip service' approach raises doubt about the leadership's trustworthiness (A115; A160; L109).

**Round 2:** H<sub>58</sub> was contested in the Leader and HR Panels (L:58%; HR:63%; Aca:83%). See table 79 above. Moreover, the pattern with different distributions repeated itself (H:.016), and the follow-up Mann-Whitney U test revealed differences between the Leader and Academic panels (Lea:Aca, U:.011); between the HR and Academic panels (HR:Aca, U:.010). A main rebuttal to the hypothesis reiterated in round two was that, while sustainability is important, the direct helping and hindering effects on leadership or work performance are difficult to identify (H10; H104; H144; H15; H21; H41; L155; L20; L43; L51; L80; A79; A84). The effects that are recognised is a motivational importance of purpose for people holding corresponding values, indicating a more indirect influence on loyalty, engagement, talent attraction and retention for some people (H135; H137; H15; H21; H42; H53; H81; L108; L140; L2; L36; L44; L57; L84; A123; A160; A84).

**H<sub>59</sub>:** The climate for sustainability can be strengthened through leadership interventions.

**Round 1:** H<sub>59</sub> was contested. All panels reached the threshold for agreement (L:72%; HR:78%; Aca:90%), see table 80 below. However, the hypothesis was contested by the IQR in both the leader and the HR panels. This also resulted in differences identified by the Kruskal-Wallis H-test (H:.026) and displayed by the Mann-Whitney U-test (Lea:Aca, U:.007; HR:Aca, U:.138; HR:Lea, U:.202), revealing significant different distributions between the leader and Academic panels. As with the previous hypothesis, the Academic Panel was most in consensus; however, to learn about why they view it differently than the other two panels, it was decided to include the factor in round 2 for all panels.

Table 80. Delphi results Climate for sustainability - strengthened	Round 1			Round 2		
	Lea	HR	Aca	Lea	HR	Aca
Median	4,00	4,00	5,00	4,00	4,00	5,00
Mode	4	5	5	4	4	5
IQR	2,00	1,25	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0	0
		0%	0%	0%	0%	0%
Disagree (D)		2	1	2	1	1
		4%	3%	7%	2%	3%
Neither agree nor disagree (N)		10	8	1	4	1
		22%	20%	3%	9%	3%
Agree (A)		21	15	10	25	23
		46%	38%	33%	58%	62%
Strongly agree (SA)		12	16	17	12	12
		26%	40%	57%	28%	32%
Total judgements		46	40	30	42	37
Do not know (1) or missing (3)		1/1	0/1	0/1	1/0	0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):*** The round one comments address that there are often both established frames, foundations or programmes as well as a practice in the organisation which determines how strong the climate is and can become. Often sustainability policies are derived from company needs to meet legislative demands or industry standards; from subscribing to sustainability programmes like the UN Global Compact; or from values around contributing with a social effort to give back to the community the company is part of (L200; A31). Within these frames, the leader can engage in sense-giving to ensure that the sustainability code is interpreted and embedded in the way the organisation operates. Hence, they can strengthen the climate for sustainability through their championing and role modelling; by pushing for creativity to increase environmental and social responsibility in all solutions; and by giving sense around the necessary trade-offs between sustainability and ways of operating (L200; L125; H98; A27; A31; H144; L109; L121).

**Round 2:** H<sub>59</sub> was confirmed (L:86%; HR:94%; Aca:90%), see table 80 above. However, the distributions proved dissimilar (H:.019), and the Mann-Whitney U test revealed that the difference captured by the Kruskal-Wallis H test pertained to a difference between the Leader and Academic Panel (Lea:Aca, U:.008), seemingly triggered by more N scores in the Leader distribution. The comments left in the second round indicate that some panellists subscribe to the proposition that the leader can influence climate strength without exemplifying it within the climate for sustainability (H103; H137; H42; L108; L139; L155; L73; A160). There is an agreement that when a company implements sustainability practices the leader plays an active role herein; and that there are climates regulating how the decided practices are lived in the organisation (A124; A13; A32; L43; L36; L43; H21; H53). H81 exemplifies: *“Formulating clear goals. Revamping the sustainability site. Creating a ‘sustainability consortium globally and at EMEA level as a forum to exchange best practices.’”* Hence, with a starting point of a company decision about investing in sustainability practices, H81 accounts for influencing both expectation-, enactment-, alignment- and agreement-based strength of the sustainability climate.

### 10.3.6 Intrinsic stratum

In the last of the strata, the intrinsic, nine hypotheses were subjected to assessment by the expert panels, and two were included in the second round.

**Table 81. Hypothesis confirmation overview, Intrinsic stratum**

Definition	The contextual factor can <u>influence the choice of leadership behaviour.</u>	The contextual factor can <u>help or hinder either leadership or employee work performance.</u>	A leader can <u>change the composition and diversity in their leadership context within the limitations given by the organisational and external context.</u>
Value composition and diversity	H <sub>60</sub> : ✓ 1	H <sub>61</sub> : ✓ 1	H <sub>62</sub> : ✓ 2
Personality composition and diversity	H <sub>63</sub> : ✓ 1	H <sub>64</sub> : ✓ 1	H <sub>65</sub> : ? 2
Expertise composition and diversity	H <sub>66</sub> : ✓ 1	H <sub>67</sub> : ✓ 1	H <sub>68</sub> : ✓ 1

Source: Delphi study. H<sub>x</sub> = Hypothesis number; ✓ = confirmed; ? = contested; 1 = after round 1; 2 = after round 2.

### 10.3.6.1 Factor: Value composition and diversity

**Definition:** The presence, level and distribution of values which guide our behaviour among the people in the leadership context. That is the composition and diversity of beliefs if authoritative or participative decision-making is best; if individual rights or group focus comes first; if we should drive change in the world or seek harmony; if we should be precise and sequential or flexible in our planning; and, if rules or relations are most important.

**H<sub>60</sub>:** The value composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Round 1:** H<sub>60</sub> was confirmed (L:80%; HR:88%; Aca:76%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The expectations to participation, involvement and decision making are closely related to the individual held values among the followers, which influence how directive or participative a leader should act to be most effective (L39; H1; L9; L109; L27; L201; A130; L92; H106; L57; L108; A31; H83). The values held by individuals and teams are influenced by national culture, but also by individual value differences, hence; the leader should engage in understanding these value settings, especially if working with different nationalities (H1; L39; L9; L125; L109; A115; A130; A67; H106; L57; A31). See appendix J for additional findings.

**H<sub>61</sub>:** The value composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>61</sub> was confirmed (L:83%; HR:85%; Aca:83%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and**

**hypothesis:** The panellists commented about the following. The extent to which a leader leads in line with her followers' implicit value-based expectations can help or hinder the effect of leadership (L39; L125; A115; H83; A31). Value diversity, stemming from differences in nationalities, or other personally held values, can make collaboration and trusting more difficult; increase non-productive conflict; reduce creativity; and make people hold back (H98; L109; L201). That is, unless the diversity is supplemented with a sufficiently strong jointly accepted behavioural code creating common ground for the team members to act from.



In such cases, differences in perspectives flowing from different held values can increase creativity; quality of problem-solving; and increase capacity to handle external complexity (L36; A123; A127; L140; L4). See appendix J for additional findings.

**H<sub>62</sub>:** A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>62</sub> was confirmed in the leader and academic panels (L:78%; Aca:87%). However, it was contested by the distribution (IQR:2.00), but not by the agreement percentage (72%) in the HR Panel. In conjunction with three HR panellists answering 'Do not know' it was decided to include the factor in round 2 for the HR Panel. See table 82 below.

Table 82. Delphi results Value - change		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	4,00	4,00	4,00	4,00
	Mode	4	4	4	4
	IQR	1,00	2,00	1,00	0,00
Strongly disagree (SD)	Count	1	0	0	0
		2%	0%	0%	0%
Disagree (D)	Count	3	2	2	1
		7%	5%	7%	3%
Neither agree nor disagree (N)	Count	6	6	2	3
		13%	15%	7%	8%
Agree (A)	Count	20	19	14	25
		43%	49%	47%	68%
Strongly agree (SA)	Count	16	9	12	7
		35%	23%	40%	19%
Total judgements		46	39	30	36
Do not know (3) or missing (4)		0/1	3/2	0/1	1/0

**The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):** The summary of comments succinctly clarified how a leader can change the composition. The opportunity for a leader to change an individual's personally held values are very limited (L200; A31; L109; A160), as expressed by L49: *"It is hard to fundamentally change people without actually changing the people."*

However, when it comes to changing the diversity in the team and arrive at a composition of team members holding values more conducive to realise the organisation's intentions; it is doable to the extent that the leader can hire and fire team members or change the team formation by rotating team members internally (H98; L109; H144; A2; A160).

**Round 2:** H<sub>62</sub> was confirmed in the HR Panel (87%) with an IQR of 0.00. Together with the results in round one (L:78%; Aca:87%), this confirms the hypothesis. The HR panellists' comments confirm that the opportunity to change the composition when replacing people is within the remit of the leader (H128; H41; H81). Also, the opportunity to influence behaviour by building a strong climate with a clear code of joint team values was identified as a pathway to influence behaviour, while acknowledging that it does not change the individually held values (H144; H103).

#### *10.3.6.2 Factor: Personality composition and diversity*

**Definition:** The presence, level and distribution of traits which guide our behaviour among the people in the leadership context. That is the composition and diversity of emotional stability; extraversion; openness; agreeableness; and conscientiousness.

**H<sub>63</sub>:** The personality composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Round 1:** H<sub>63</sub> was confirmed (L:91%; HR:90%; Aca:83%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** The needs of followers in respect of leadership attention, emotional support, autonomy, interaction frequency, risk avoidance, planning, predictability, structure, and stretch is closely related to the personality of the follower. Likewise, the personality-rooted differences drive differences related to the needs and wants in peer interactions and job design (H98; H59; H144; H59; L109; L201). To create effective functioning, a clear code stipulating the expected behaviours helps promote performance and well-being. The leader should use such a code encompassing values, principles or behaviour to create mutual obligations between the team members (L200; L92; L58; H42). Hence, the leader needs to align expectations about the extent to which such needs can be met.

Also, to adapt leadership style to release the potential of the individual; and set up the ways of working to make job demands meet the strengths and shortcomings in the employees' personalities (L1; H42; A130; H98; H83; A96; H59; L109; L121; L57; L49). See appendix J for additional findings.

**H<sub>64</sub>:** The personality composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>64</sub> was confirmed (L:91%; HR:93%; Aca:87%) and not included in round 2.

**Excerpt from the round 1 qualitative analysis confirming the definition and hypothesis:** Personality exercises a significant influence on performance because a match between traits and job demands helps performance and a mismatch hinders performance (H42; H111; L49). Differences between team members' personalities hold the potential to help performance by supplying divergent thinking, spur creativity; and enable supplementing each other with personal strengths (A27; L125; L201; A122; H83). At the same time, personality differences hold power to spur disagreement, workplace conflict, frustration, demotivation, poor collaboration, and counterproductive behaviour (A123; H83; H135; L200). See appendix J for additional findings.

**H<sub>65</sub>:** A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>65</sub> was contested on the agreement levels in all panels (L:63%; HR:51%; Aca:66%) and the distributions in the HR and Academic panels. See table 83 on the following page. The analysis of the comments (below the table) indicated that many panellists might have answered that personality cannot be changed, rather than if personality composition in a team can be changed. Hence, the hypothesis was included for all panels in round 2.

Table 83. Delphi results Personality - change		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	4
	IQR	1,00	1,25	2,00	0,00	1,00	1,50
Strongly disagree (SD)	Count	1	1	1	0	0	1
		2%	3%	3%	0%	0%	3%
Disagree (D)		4	6	1	2	3	1
		9%	15%	3%	5%	8%	4%
Neither agree nor disagree (N)		12	9	7	5	12	4
		26%	23%	23%	11%	32%	14%
Agree (A)		22	13	10	28	17	12
		48%	33%	33%	65%	46%	41%
Strongly agree (SA)		7	7	10	8	5	10
		15%	18%	33%	19%	14%	35%
Total judgements		46	39	30	43	37	28
Do not know (4) or missing (4)		0/1	3/2	1/1	0	0	1/0

***The full summary of the round 1 comments from Panellists included in the round 2 survey (without referencing the panellists):***

The personality of people is a relatively constant factor; however, how for example extraversion is manifested in behaviour that the person can regulate to a certain level to promote work performance (L84, L105; A74; H114; L49). Such adjustment of behaviour, not personality itself, is an important part of leadership and foster engaging in raising awareness through feedback; expressing behavioural expectations and facilitating learning to promote behavioural change (L84; H42; H144; L109). The team composition of personalities can be altered by changing people on the team, which, in turn, demands that the leader holds the mandate to hire, fire, or replace team members (L27; A123; A87; H10; H116; L107). As stated by one panellist, "*Leaders can change the personality composition, but changing personalities is another field*" (L105). For the leader to influence the team composition by changing team members is a key performance driver that should be used deliberately to promote performance (L27; L125; H144; H114).

**Round 2:** H<sub>65</sub> was contested. However, it was confirmed in the Leader Panel (L:84%) with an IQR of 0.00, while contested in the HR Panel (HR:60%; IQR:1.00) and the Academic Panel (Aca:76%; IQR:1.50). The Leader panellists widely acknowledged that changing staff is a part of the leadership toolbox influencing work performance.

Also, that for periods you need to 'work with the people you have'; yet effective leadership entails staffing for success (L108; L134; L155; L27; L28; L36; L43; L44; L49; L67; L73). Twelve panellists (32%) in the HR Panel answered N, and hereof seven HR panellists left comments acknowledging that if given the mandate leaders can change the personality composition and diversity in their leadership context (H103; H98; H81; H109; H149; H21; H53). There was an agreement in the Academic Panel that it is important to understand your own and the employees' personalities as a foundation for effective leadership (A127; A146; A160; A48; A79; A84), while the IQR score of 1.50 was driven by A123 answering SD and A87 answering D arguing that leaders do not have the mandate to hire and fire. In addition, A48 maintained an answer of 'Do not know' with a comment of "*personality DOES NOT CHANGE.*" See appendix J for additional findings.

### *10.3.6.3 Factor: Expertise composition and diversity*

**Definition:** The presence, level and distribution of expertise which influence behaviour among the people in the leadership context. That is the composition and diversity of task-, adaptive-, and contextual expertise.

**H<sub>66</sub>:** The expertise composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Round 1:** H<sub>66</sub> was confirmed (L:82%; HR:93%; Aca:87%) and not included in round 2.

#### ***Comments from the round 1 qualitative analysis confirming the definition and hypothesis:***

The analysis of comments revealed an important effect of higher expertise in the team led. Leading people with high task expertise entails allowing them the autonomy in their professional areas shifting leadership towards output-focused facilitative leadership ('what') rather than more directive effort-focused leadership ('what and how'). The reason is that the leader can be leading people with higher task expertise than the leader herself; and because the need of orchestrating contributions from different expertise-holders increases (A31; A124; L125; L105; L20; L200; A123). Conversely, a lower level of expertise among staff increases the relevance of formalising work processes to ensure reliable organisational performance (L121; L201; A74). No matter high or low levels of expertise, the demands put on individuals should reflect their expertise level (L113; A74; L105; H42; H98; L107). Moreover, the importance of this adaptive leadership approach increases when leading across staff groups with varying expertise levels, e.g. in a hospital leading Doctors, Nurses, and Medical clerks; or leading both a tenured and a new team (A84; H98).

Also, in settings with different professional groups, it becomes an important leadership task to increase the understanding and 'bridge' for the thinking and approaches shaped by backgrounds in different disciplines (L109; A27).

**H<sub>67</sub>:** The expertise composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Round 1:** H<sub>67</sub> was confirmed (L:83%; HR:90%; Aca:90%) and not included in round 2.

***Excerpt from the round 1 qualitative analysis confirming the definition and***

***hypothesis:*** To start with, the comments suggest that the expertise levels and composition of the team hold the potential to boost performance and contribute to making the right decisions (A74; A124; H98; H83; H35; L36). That applies when the competencies relate to the domain-specific task performance (A31; L113); to the adaptive expertise in generating ideas, learning and facilitating divergent thinking (L201; L109; H144), or, the contextual abilities to collaborate, communicate, use collaborative and knowledge sharing technology, and identify and put colleagues into play to promote performance (A115; L27; L2; A123). On the hindering side, high expertise in a field can intensify path dependence; reduce the willingness to rethink past assumptions; and lead to overconfidence in own abilities (L82; A31; A123). Furthermore, a potential hindering effect of high expertise among the staff is if experts 'compete' with each other in their fields of expertise stifling the knowledge sharing and co-creation, and effect that can include the leader himself if also a domain-expert (A124; A96; A74). See appendix J for additional findings.

**H<sub>68</sub>:** A leader can change the expertise composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Round 1:** H<sub>68</sub> was confirmed (L:78%; HR:79%; Aca:79%). That is, that within her mandate and the access to desired talent the leader can change the expertise levels in the team by adding or removing members from the team (L49; A31; A124; A87; A160). As expressed by one panellist: "*Hiring the right people with the right expertise is probably the most effective strategy to success*" (A31). In addition, expertise can be developed through training and learning (H144; L57; A124). In turn, both training and learning as well as changing people on the team should rest upon the requirements from the intention the leader is shaping the team to pursue; that is, the specific task, adaptive or contextual performance desired (L200; L57; H144; A31).

# Chapter Eleven

## 11. Discussions and contributions

As discussed in Chapter 2, more attention to contextual influence upon leadership has emerged over the past two decades. However, the move is not supported by placing leadership context at the centre of research, but rather by paying more attention to the inclusion of a few contextual factors (Dinh et al., 2014; Oc, 2018; Porter and McLaughlin, 2006). As noted by Oc (2018), in his article on *Contextual leadership: A systematic review of how contextual factors shape leadership and its outcomes*, there is no distilled and widely accepted framework for organisational context. This research aimed to put the leadership context at the centre of research to create such a framework. As shown in table 1, p. 17, displaying the architecture of leadership context, the leadership context is a complex matter; however, an inner structure of the phenomena emerged. This Chapter starts by responding to the research questions followed by discussing selected results from the Delphi study. The initial discussion is concluded in the thesis' main contribution: a nascent Stratified Leadership Context Framework. From the conclusion, the Chapter continues with a comparison to the extant literature on leadership and organisational context before limitations are discussed. Hereafter, contributions are considered, and the thesis ends by suggesting avenues for further research.

### 11.1 Responding to the research questions

In this section, the four research questions are answered based on the findings from this study at an overall level. Firstly, the study asked: "*What is leadership context?*" The answer emerged through the multiple iterations between the integrative literature review and the Critical Realism literature. The propositions were since further verified through the Delphi study. It became clear that possessing causal powers, which can influence leadership agency or employee work performance, explains what leadership context is. Leadership context is the collection of factors with such causal powers. Naturally, applying causal powers directed towards the defined agency types as the inclusion criteria is a key presupposition that other researchers could reinvestigate. Secondly, the study set out to identify: "*Which factors comprise leadership context?*" Identifying factors in the literature and the judgements from the Delphi panels provided the study's answers. It remains clear that the 28 factors remaining after the Delphi rounds are part of the leadership context; however, this does not preclude additional factors not identified in this study.

Thirdly, the ambition was to answer: “*What are these factors’ causal tendencies influencing leadership and work performance behaviour?*” The causal tendencies identified and confirmed pertain to three effects: 1) Influencing the choice of leadership behaviour, 2) Helping leadership and employee work performance, 3) Hindering leadership and employee work performance. More causal tendencies may exist; however, no other patterned causal tendencies influencing agency were identified in this study.

Finally, the fourth research question asked: “*Which factors in the leadership context can be influenced by leadership interventions?*” The contextual factors’ different characteristics led to identifying three leadership interventions as influencing malleable contextual factors: 1) increasing or decreasing systemic factors; 2) strengthening climates; and 3) changing the staff composition in the intrinsic stratum. In turn, this allowed the identification and confirmation of 20 contextual factors out of the 28 as malleable through leadership interventions.

## **11.2 Discussion of selected results from the Delphi study**

In this section, the cases where the quantitative results and the qualitative analysis of the comments did not align are discussed to nuance the answers to the research questions. The discussion leads to a conclusion in the nascent Stratified Leadership Context Framework, summarised in the following section.

### *11.2.1 External complexity and dynamism – requisite variety and judgemental awareness?*

For both factors, the helping and hindering effects were contested in round one. While meeting the consensus threshold, the IQR contested the hypothesis (H<sub>12</sub>) in the Academic Panel for external complexity and the Leader Panel for external dynamism (H<sub>14</sub>). In round two, all consensus criteria were met. Nevertheless, the SD, D and N scores in conjunction with some panellists’ comments raise a consideration related to the Stratified Leadership Context Framework. It can be speculated that the spread in round one relates to the requisite fit assumption recognised by other authors investigating leadership context (e.g. Johns, 2006; Osborn, Hunt and Jauch, 2002). It could be considered that if an internal fit has already accommodated the causal powers of external contextual factors, it demands a high level of judgemental awareness for any researcher to account for the external factors seemingly without effect. In turn, this mechanism might be part of the explanation of the widespread reductionism (Porter and McLaughlin, 2006) when it comes to the inclusion of context in leadership research.



Naturally, a researcher will often include only the contextual factors which need to be controlled for in the analysis, not all factors situating the research. This is subsequently a problem for generalizability. The considerations further cement the relevance of having a common framework for leadership context, as suggested by Johns (2006), and repeated by Oc (2018), as this would allow both situating and controlling for contextual factors.

### *11.2.2 Helping and hindering effects of hierarchical level – leadership only?*

The theoretical framework warranted an influence from the hierarchical level on leadership. However, no empirical findings mentioning an influence from the hierarchical level on work performance was identified in the literature review. In the survey, the contextual factor was correctly introduced as “*Whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.*” Nevertheless, due to this Author's inattention in setting up the survey, the hypothesis (H<sub>16</sub>) was formulated: “*Hierarchical level can help or hinder either leadership or employee work performance.*” It was a mistake to suggest that hierarchical level can also help or hinder employee work performance. The hypothesis was contested in round one, as reported in the previous Chapter and included in round 2. After consideration, the hypothesis formulation was kept because the round 2 survey refers to the panellist's answer in round 1.

Moreover, some comments in round one also mentioned an effect of hierarchical placement on employees. In round two, H21 explicitly raised the point that the hierarchical level does not influence employee work performance but only leadership. Reanalysing the answers from both rounds confirmed an absence of remarks directly addressing work performance, suggesting that the panellists have concentrated on leadership when assessing their agreement level to the hierarchical level's causal effect. Several panellists in round one did refer to employees being helped by a higher hierarchical placement in influencing throughout the organisation, but without referring to work performance per se (L105; H144; A27; A160; A84). Hence, it seems that the confirmation concerns that hierarchical level helps a given person influence others, which can be considered leadership, also when exercised temporarily by an employee. It follows that the helping and hindering powers held by hierarchical placement, as warranted in the literature (Antonakis, Avolio and Sivasubramaniam, 2003; Avolio *et al.*, 2004b; DeChurch *et al.*, 2010; Dinh *et al.*, 2014; Kaiser and Craig, 2011; Kaiser *et al.*, 2011; Katz and Kahn, 1978; Mumford, Campion and Morgeson, 2007; Wang *et al.*, 2011), only pertains to leadership, not work performance. Hence, no causal helping or hindering effect on work performance is included in the Stratified Leadership Context Framework.

### 11.2.3 *Shaping systemic factors – a part of the leadership range?*

For the factors in the systemic stratum besides the hierarchical level, it was hypothesised that “A leader can increase or decrease [the contextual factor] in their leadership context within the limitations given by the organisational and external context.” For centralisation, internal complexity, interdependence, and resource constraints, the increase-decrease hypothesis (H<sub>19</sub>; H<sub>25</sub>; H<sub>28</sub>; H<sub>31</sub>) was contested in round one. However, informed by the input from other panellists, all panels reached a consensus about the hypothesis for these factors in round two. The round one dissensus could be related to the established understanding of leadership as pertaining primarily to the direct agency to agent influence (e.g. Bass, 1985; Burns, 1978; Hamlin and Hatton, 2013; Kouzes and Posner, 2006). Interestingly, when sensitised to the examples from the other panellists, it seems that the understanding of the leadership range in the panels extended to include shaping context to influence other agents. Such attention is included in some leadership theories, including ‘shaping’ leadership behaviours as *initiating structure* (Bass, 1985) or *planning and organising and proactive execution and control* (Hamlin and Hatton, 2013). It indicates that a leadership context framework could assist some leadership theories also to include ‘shaping context’ in their range. Moreover, that a leadership context framework could extend the understanding of which contextual levers to influence with the ‘shaping’ behaviour included in the effective leadership range.

### 11.2.4 *The climate for service – a ‘purpose’ effect?*

Both hypotheses about the climate for service, the helping-hindering effect (H<sub>44</sub>) and strengthening opportunity (H<sub>45</sub>) were contested in round one by the HR Panel; but reached consensus in round 2. The HR panellist comments in round 2 highlighted the importance of purpose as a main helping effect. It corresponds well with the recognition of purpose and creating meaning in the leadership literature (e.g. Bass and Riggio, 2014; Kouzes and Posner, 2006) and the leader’s task of pulling people towards what is most important for the organisation (Higgs and Dulewicz, 2016). It indicates a unique feature for the climate for service, which could concern a causal effect of ‘purpose’ not investigated in this study. It could be speculated if this causal effect, which helps leadership, also exists for other climates, and, in turn, if other climates relevant to include in the leadership context because of ‘purpose-effects’ exists. The considerations further warrant the inclusion of the climate for service in the Stratified Leadership Context Framework.

### 11.2.5 *The climate for fairness and justice*

The hypothesis that the climate holds helping-hindering effects ( $H_{50}$ ) was contested in the HR Panel by seven HR panellists answering N, resulting in an IQR of 1.25, while consensus on SA and A was 78%. However, not many remarks were left by HR panellists in round one, and the hypothesis arrived at a strong consensus in round 2 (95%). The higher number of N scores in round one was surprising given that the causal effects are well warranted in the literature (Ehrhart, 2004; Podsakoff *et al.*, 2006; Rupp and Thornton, 2014; Schneider, Ehrhart and Macey, 2013; Shalley and Gilson, 2004) and given the consensus in the other panels (L:91%; Aca:90%). Nevertheless, the HR Panels' IQR in round one remains unexplained; and the climate's inclusion is considered well-warranted without any caveats due to the established role in extant research as identified in the literature review.

### 11.2.6 *The climate for empowerment*

The climate comprises two main components. Firstly, leadership-followership cocreation of influence conducive to the emergence of work performance behaviour (Andriopoulos, 2001; Berson *et al.*, 2006; Patel, Pettitt and Wilson, 2012; Salas, Sims and Burke, 2005; Uhl-Bien *et al.*, 2014; Wang *et al.*, 2011). Secondly, more independent follower actions promoting the organisational intentions in continuation of an earlier influence from leadership (Andriopoulos, 2001; Avolio *et al.*, 2004b; Pearce, 2004; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012; Wang *et al.*, 2011). This led to an initial terming of the climate as *the climate for following and sharing leadership* to capture both components. Based on the learnings in the pilot and to simplify, it was called *the climate for following* in round one. In the design of round 2, it was decided to rename the factor to *the climate for empowerment* because seven leader panellists answered N resulting in an IQR of 2.0. This was surprising for mechanisms pertaining to followership and empowered initiative, which this Author assumed would be considered central in the understanding of leadership by all leaders. Renaming the factor was a judgement call based on remarks across the panels emphasising empowerment more than followership. That led to the speculation if the word "*following*" was too passive, making the seven leader panellists answer N. The consensus in the Leader Panel moved from a consensus level of 74% in round one to 98% in round 2, while also moving the IQR from 2.00 to 1.00.

In the literature, there is a differentiation between followership (Uhl-Bien *et al.*, 2014) and shared leadership, which is considered full enactment of empowerment (Pearce, 2004), while the definition developed in the theoretical framework herein suggests that they should be considered together. This study's results strongly warrant the inclusion of a climate conducive to following and empowered action in the Stratified Leadership Context Framework. Nevertheless, the presupposition that followership and empowered self-directed action are inseparable challenges the delineation suggested by Uhl-Bien *et al.* (2014), who excluded empowered self-directed action from followership. Further research into how climate(s) help and hinder followership, empowered action and shared leadership respectively and together would contribute to the further understanding.

### *11.2.7 The climate for safety – only physical or?*

As accounted for in the results section, there were several comments in round one expressing doubt about whether the climate for safety encompasses both physical and psychological safety (H124; H98; A48; A68). That led to an update of the definition from round one to round two by adding (underlined) “...when it comes to physical safety; the assessment of work hazards and threats;...” to reflect the focus warranted in the theoretical framework. There is a clear focus on physical safety and health risk in the literature when it comes to safety climate (e.g. Baran and Scott, 2010; Zohar, 2014), and the study's result warrant the inclusion in the Stratified Leadership Context Framework. Nevertheless, some panellists also commented on psychological risk in their responses to the climate for safety. In this study, the psychological risk is addressed as participative safety in the climate for collaboration (Andriopoulos, 2001; Cogliser and Schriesheim, 2000; Dragoni, 2005; Hogg, Van Knippenberg and Rast, 2012a; Jung *et al.*, 2009; Michie and West, 2004; Patel, Pettitt and Wilson, 2012; Salas, Sims and Burke, 2005; von Krogh, Nonaka and Rechsteiner, 2012) when it concerns the effects between organisational constituents. However, no findings related to the psychological risks from working in environments with high levels of emotional strains, such as in psychiatric care or social work, were identified in the literature selected for review. Concurrently, a Google Scholar search (accessed 18<sup>th</sup> March 2021) on “psychological safety” literature published since 2017 yielded 8,510 results indicating that a large body of literature exists. In continuation, it can be speculated that such environments would hold choice-guiding effects on leadership and helping-hindering effects on work performance. Future research could determine if the climate for safety should also encompass psychological safety or if this climate is separate from the climate for safety included in the Stratified Leadership Context Framework.

### *11.2.8 The climate for sustainability*

The hypothesis (H<sub>58</sub>) that the climate for sustainability can help or hinder either leadership or employee work performance was contested by the leader and HR panels in both Delphi rounds. Interestingly, the Academic Panel confirmed the hypothesis in round one (Aca:73%) and round 2 (Aca:83%). The comments from round one seems to have reinforced the academic panellists in their confirmation. Conversely, the leader and HR panellist left many comments about disagreeing because of the difficulty of identifying direct helping or hindering effects on leadership or work performance (H10; H104; H144; H15; H21; H41; L155; L20; L43; L51; L80). The dissensus on H<sub>58</sub> and that the climate was included in the theoretical framework due to attention in the business press, rather than presence in the reviewed empirical research literature means that it will not be included in the nascent Stratified Leadership Context Framework. Despite the rejection of the helping-hindering hypothesis (H<sub>58</sub>), the hypothesis (H<sub>59</sub>) that the climate for sustainability can be strengthened through leadership interventions was confirmed in round two in all panels.

Howard-Greenville, Bertels and Lahneman (2014) investigated the literature on how the increasing attention to sustainability in society influences organisational climates. They argued that the demands in the external environment from consumers, environmental interest groups, shareholders, communities, and politicians drive stronger internal attention influencing organisational climates (Howard-Greenville, Bertels and Lahneman, 2014). This growing emergence is further supported by a search in Google Scholar on the term "sustainability leadership", which yielded 800 results for 1985-2010, and 6,600 results from 2010 onwards (accessed 17 February 2021). Together, it is possible that currently, the awareness about how sustainability can affect leadership and work performance is stronger in Academe than it is among practitioners. Simultaneously, all panels agreed that if a climate for sustainability is desired for the company, it can be strengthened through leadership interventions (L:86%; HR:94%; Aca:90%).

In conclusion, the climate for sustainability is not included in the Stratified Leadership Context Framework. Rather, it is considered a climate with a specific strategic focus (Schneider, Ehrhart and Macey, 2013) that has not yet achieved the centrality like the climate for service among practitioners.

In turn, the weak centrality could be the reason for not experiencing direct helping and hindering effects on leadership and work performance. It raises the question as to whether the climate for sustainability will develop into having a central place like the service for climate due to the 'purpose-effects' discussed above.

It also raises the attention to whether other climates with the same level of centrality and causal effects on leadership and work performance as the climate for service exist, without having been captured by this study's literature search. For example, the parts of school climate which concern the purpose, i.e. developing the learners. Thapa et al. (2013) found school climate to cover five dimensions: Institutional Environment, Teaching and Learning, the School Improvement Process, Safety, and Relationships, whereof the "Teaching and Learning" dimension could have 'purpose-effects'. Or, as another example, the motivational climate in sports (Keegan *et al.*, 2011) concerning creating a desired outcome, which could be speculated to have 'purpose-effects' resulting in helping and hindering effects on leadership and work performance.

#### *11.2.9 Value composition and diversity – is it malleable?*

It was surprising that the hypothesis (H<sub>62</sub>) that "*A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context*" was contested by the distribution (IQR:2.00) in the HR Panel. It seemed to concern the same mechanism as occurred related to personality composition and diversity elaborated in the following section. That is, that some panellists wanted to make the statement that values cannot be changed, but composition can if people are rotated in or out of a team. For the value composition and diversity, the HR Panel moved to consensus (87%; IQR:0.00) in round 2, supported by comments considering that it is possible to change the composition when replacing people is an option. The contextual factor is included in the Stratified Leadership Context Framework as malleable through leadership interventions.

#### *11.2.10 Personality composition and diversity – it is malleable?*

The hypothesis (H<sub>65</sub>) that: "*A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context*" was contested in all panels in round one (L:63%; HR:51%; Aca:66%). The comments indicated that the dissensus concerned if personality can be changed, rather than if the composition of team members can be changed. The distinction was clarified through the summary of comments included in round 2. Thus, it was surprising that hypothesis (H<sub>65</sub>) was contested in round two by the HR and Academic panels. A closer analysis of the comments compared to the scale-scorings in round two nuances the picture.

In round two, the HR Panel arrived at an agreement percentage of 60%; while twelve panellists (32%) answered N. H103 changed from D to N, confirming in the comment that a leader can change composition if allowed to fire and hire; and if the labour law and hiring market also make it a real option. H98 also moved from D to N, commenting that *'I appreciate here the difference between changing one person's personality and changing the composition of personalities in a team'*. H81 moved from a missing answer to N, while confirming that *'a leader can change quickly the composition of his team if he is given a clear mandate and resources.'* H109 maintained an answer of N because *"the biggest influencer for changes is in hiring and not the exercise of leadership"* placing recruiting outside the leader practice range. H149 maintained an answer of N, commenting that *'in a situation where hiring or firing is constrained, there is only so much influence a leader can have.'* H21 and H53 also maintained answers of N, alluding to the often-restricted mandate for leaders to exchange team members. Together, the seven HR panellists confirmed agreement in their comments, but did not agree in their scale-answers.

The round 2 quantitative results were also contested by the IQR of 1.50 in the Academic Panel. Investigating the qualitative comments adds to the understanding. A123, who answered SD in both rounds, explained: *"My answers here are partly a result of the overall difficulty of hiring and firing actions in public sector organisations."* A123 elaborated that a leader can only change an employee if the employee does *'something illegal or unethical, otherwise the leader's hands are tied.'* Alluding to a similar point, A87 answered D in round two because *"if leaders had this kind of control, the world would be vastly different!"* A48 maintained answering 'Do Not Know' while commenting that *"personality DOES NOT CHANGE, behaviour does. Certainly, there is an entire literature that exists on the diversity of teams and the necessity for the leader to staff to his/her weaknesses."* Together, the comments from these three academic panellists do not correspond with their scale-responses, which seem to rest on the assumption that a leader does not have the mandate to exchange staff. In comparison, the definition of the hypothesis presented was: *"A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context."*

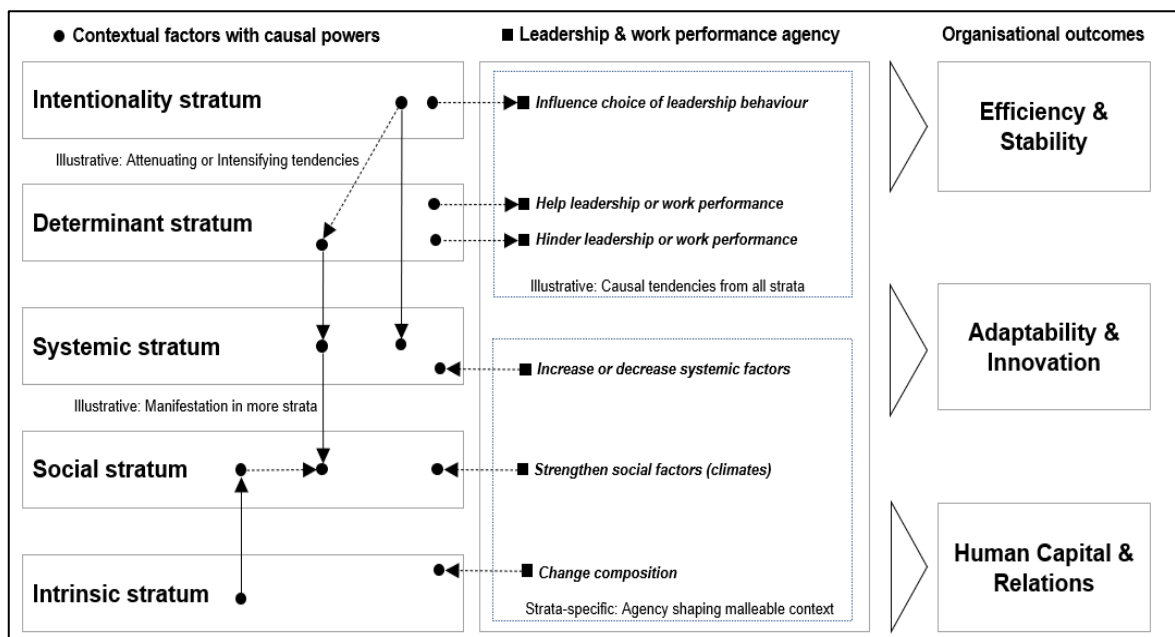
Together, the quantitative Delphi results seem to be influenced by a desire to make the statement that personality cannot be changed, even though the question was about composition. In continuation, the restrictions in labour law led some panellist to consider that changing staff is outside the leader's mandate. Given the substantial support in the literature to the hypothesis (H<sub>65</sub>) (Antonakis, Avolio and Sivasubramaniam, 2003; Dinh et al., 2014; Ehrhart, 2004; Judge and Zapata, 2015; Michie and West, 2004) and the clarification in the summary from round one these findings were surprising.

Hence, the study could have made it clearer that it was not suggested that personalities change; and that changing composition does not necessarily entail hiring or firing employees. It could also concern composing teams for different projects or changing the composition by moving people between job functions. Given the above discussion, the confirmation of agreement in the comments and the support in the literature, the leadership intervention is included in the Stratified Leadership Context Framework.

### 11.3 Conclusion: The nascent Stratified Leadership Context Framework

The answers to the research questions and the discussion of the selected results from the Delphi study are concluded in figure 3 and tables 84 to 88, representing the nascent Stratified Leadership Context Framework (SLCF).

Figure 5. The Stratified Leadership Context Framework, overview



Source: This thesis



**Table 84. The Stratified Leadership Context Framework, Intentionality stratum**

Contextual factor	Causal tendency	Leadership response
The intention to pursue exploitation and task performance.	<ul style="list-style-type: none"> <li>Influence the choice of leadership behaviour</li> </ul>	<ul style="list-style-type: none"> <li>Promote the intention by choosing the most conducive leadership behaviours in the leadership behaviour range.</li> <li>Promote the intention by shaping the malleable contextual factors with helping causal effects. That is, increase or decrease systemic factors, strengthen climates in the social stratum, and change composition and diversity in the intrinsic stratum to be fit for purpose.</li> <li>Promote the intention by attenuating hindering or intensifying helping contextual effects from some contextual factors by influencing other contextual factors. In addition, also by mitigating through direct leadership agency.</li> </ul>
The intention to pursue exploration and adaptive performance.		
The intention to pursue human capital quality and contextual performance.		

Source: Delphi study

**Table 85. The Stratified Leadership Context Framework, Determinant stratum**

Contextual factor	Causal tendencies	Leadership response
Physical distance	<ul style="list-style-type: none"> <li>Influence the choice of leadership behaviour</li> <li>Help leadership</li> <li>Hinder leadership</li> <li>Help work performance</li> <li>Hinder work performance</li> </ul>	<ul style="list-style-type: none"> <li>Leverage or mitigate causal effects from determinant factors by choosing the most conducive leadership behaviours in the leadership behaviour range.</li> <li>Intensify helping or attenuate hindering contextual effects from determinant factors by shaping other contextual factors. That is, increasing or decreasing systemic factors, strengthening climates in the social stratum, and changing composition and diversity in the intrinsic stratum.</li> </ul>
Risk intensity		
External complexity		
External dynamism		

Source: Delphi study

**Table 86. The Stratified Leadership Context Framework, Systemic stratum**

Contextual factor	Causal tendencies	Leadership response
Hierarchical level	<ul style="list-style-type: none"> <li>• Influence the choice of leadership behaviour</li> <li>• Help leadership</li> <li>• Hinder leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage or mitigate causal effects from the hierarchical level by choosing the most conducive leadership behaviours in the leadership behaviour range.</li> <li>• Intensify helping or attenuate hindering contextual effects from the hierarchical level by shaping other contextual factors.</li> </ul>
Centralisation	<ul style="list-style-type: none"> <li>• Influence the choice of leadership behaviour</li> <li>• Help leadership</li> <li>• Hinder leadership</li> <li>• Help work performance</li> <li>• Hinder work performance</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage or mitigate causal effects from the relevant systemic factor by choosing the most conducive leadership behaviours in the leadership behaviour range.</li> <li>• Increase or decrease a systemic factor to promote helping or reduce hindering causal effects on leadership or work performance.</li> <li>• Intensify helping or attenuate hindering contextual effects from a systemic factor by shaping other contextual factors. That is, increasing or decreasing systemic factors, strengthening climates in the social stratum, and changing composition and diversity in the intrinsic stratum.</li> </ul>
Formalisation		
Internal complexity		
Interdependence		
Resource constraints		

Source: Delphi study

**Table 87. The Stratified Leadership Context Framework, Social stratum**

Contextual factor	Causal tendencies	Leadership response
Climate for exploitative learning	<ul style="list-style-type: none"> <li>• Help leadership</li> <li>• Hinder leadership</li> <li>• Help work performance</li> <li>• Hinder work performance</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen the relevant climate to promote helping or reduce hindering causal effects on leadership or work performance. That is influence the expectation-based, the enactment-based, the alignment-based and the agreement-based strength.</li> <li>• Intensify helping or attenuate hindering contextual effects from a climate by shaping other contextual factors. That is, increase or decrease systemic factors, strengthen other climates, and change composition and diversity in the intrinsic stratum.</li> </ul>
Climate for explorative learning		
Climate for change		
Climate for diligence and discipline		
Climate for goal-path clarity and stretch		
Climate for service		
Climate for collaboration		
Climate for productive discussions		
Climate for fairness and justice		
Climate for empowerment		
Climate for safety		
Climate for ethical conduct		

Source: Delphi study

**Table 88. The Stratified Leadership Context Framework, Intrinsic stratum**

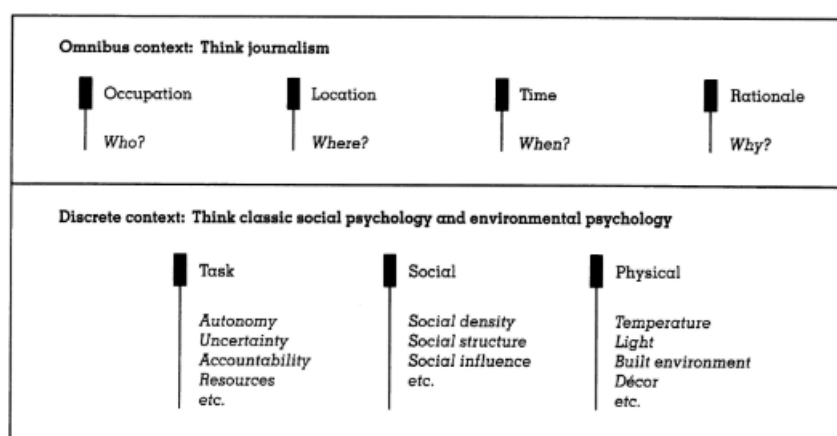
Contextual factor	Causal tendencies	Leadership response
Value composition and diversity	<ul style="list-style-type: none"> <li>• Influence the choice of leadership behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage or mitigate causal effects from the intrinsic compositions and diversities by choosing the most conducive leadership behaviours in the leadership behaviour range.</li> </ul>
Personality composition and diversity	<ul style="list-style-type: none"> <li>• Help leadership</li> <li>• Hinder leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Change the composition and diversity to promote helping or reduce hindering causal effects on leadership or work performance.</li> </ul>
Expertise composition and diversity	<ul style="list-style-type: none"> <li>• Help work performance</li> <li>• Hinder work performance</li> </ul>	<ul style="list-style-type: none"> <li>• Intensify helping or attenuate hindering contextual effects from an intrinsic factor by shaping other contextual factors. That is, increase or decrease systemic factors, strengthen climates, and change composition and diversity for intrinsic stratum factors.</li> </ul>

Source: Delphi study

In the following sections, the nature of leadership context is further discussed, and the Stratified Leadership Context Framework (SLCF) is related to significant literature on leadership context.

#### **11.4 Discussion – this thesis in the stream of leadership context research**

In this section, the SLCF is situated within the leadership context research by comparing this thesis' findings to the seminal work on *The Essential Impact of Context on Organisational Behaviour* by Johns (2006) and Oc's (2018) follow-up. Oc (2018) built on Johns (2006), who proposed a categorical framework for organisational context encompassing "*Some Important Dimensions of Context*" (p. 392), as also shown in Chapter 2 of this thesis, see figure 6.

**Figure 6. Some Important Dimensions of Context**

Source: Johns (2006)

Johns (2006) suggested categorisation of context into omnibus and discrete context, where the former pertains to the Who, What, Where, and When, while the latter concerns Task, Social, and Physical context. Applying causal powers directed towards organisational agents or between contextual factors as inclusion criteria Johns (2006) defined context as situational opportunities and constraints. Johns (2006) focused on exemplifying *“what context does to organisational behaviour and how it affects scientific inferences about this behaviour”* (p. 395). There are three causal effects reported by Johns (2008) and Oc (2018) that are interesting related to the SLCF; restricting the range, affecting base rates, and curvilinear effects.

Firstly, that omnibus context restricts the range of variables under consideration by imposing limitations to the discrete context (Johns, 2006; Oc, 2018). For example, limitations stemming from the legislative environment the organisation is nested within or from the national culture the organisational climate is nested within. The stratification organising the SLCF supports the operationalisation of such nested inter-context dynamics and thereby extends the understanding suggested by Johns (2006) and Oc (2018). Secondly, both authors contended that the omnibus context can affect the base rate in the discrete context. For example, when the accessibility of highly educated talent in the demographic area limits the staff composition in an organisation. In that respect, the SLCF is delineated from explaining such distant factors influencing the base rate due to the inclusion criteria pertaining to direct effects on leadership or work performance. Hence, awareness of the omnibus context in a wider frame remains relevant in understanding organisational base rates, and SLCF should be considered nested within the wider societal context.

Thirdly, Johns (2006) and Oc (2018) found that contextual factors can have curvilinear effects; for example, some job complexity can be motivating, but high job complexity can result in stress. The curvilinear causal effects raised the attention to a pattern that occurred in this study's data. The comments on the helping and hindering effects of the climate for goal-path clarity and stretch suggest that such curvilinear effects exist for the climate. The panellists commented that a strong climate for goal-path clarity helps performance and motivation (L20; L109; H10; L43; L139). On the other hand, indicating a curvilinear relation, a strong climate for goal-path clarity and stretch focused narrowly on performance efforts can demotivate employees with a high need for autonomy and mastery and impede empowered initiative (A123; L125). Also, too aggressive goal setting can result in stress, burnout, and disbelief; whereas too unaggressive goal setting can be demotivating – it is about striking a motivating 'stretch' with ambitious, yet realistic goals fit for organisational purpose and team/individual efficacy (A96; H42; L125; L201). A similar pattern emerged pertaining to the relationship between centralisation and decision speed. Here the comments pointed in both directions indicating a curvilinear relation. They commented that centralisation can reduce speed when decisions need to be sent up the hierarchy for decision or approval (L108; A122). Conversely, centralising certain decisions can make it easier and quicker for an organisation to get answers (A96; L82). A curvilinear relation also seems to exist between diversity and creativity. Here the comments on value composition and diversity draw the picture that Value diversity, stemming from differences in nationalities, or other personally held values, can make collaboration and trusting more difficult; increase non-productive conflict; reduce creativity; and make people hold back (H98; L109; L201). That is, unless the diversity is supplemented with a sufficiently strong jointly accepted behavioural code creating common ground as a basis for the team members to collaborate. In such cases, differences in perspectives flowing from different held values can increase creativity, quality of problem-solving and increase capacity to handle external complexity (L36; A123; A127; L140; L4).

As exemplified by the relation between value diversity and creativity, the curvilinear relation seems to be intensified or attenuated by other factors playing into a balanced tension system. Johns (2006) argued that the widespread reductionism in the inclusion of contextual variables poses a problem in understanding this tension system. The curvilinear mechanism and the between-factors intensifying and attenuating effects highlights two presuppositions important to stay aware of if applying the SLCF.

Firstly, this study has presumed that the helping-hindering effects exist on a continuum related to each contextual factor and that one factor cannot simultaneously exercise helping and hindering effects on the same agency. Secondly, it is assumed that all factors can exercise helping and hindering effects depending on the curvilinear relation to leadership or work performance. In continuation, other factors can intensify or attenuate these effects and thus, the effects of a certain factor can be related to the strength of other factors in the leadership context.

Interestingly, Oc (2018) and Johns (2006) offers no operationalisation of the force field, nor has any operationalisation been identified elsewhere in the reviewed literature. Applying the SLCF in a four-step manner would operationalise the tension system or force field (Lewin, 1951 in Johns, 2006). A first step could be to ask which factors are experienced as exercising helping, no, or hindering effects on the work performance or leadership in focus. Secondly, to investigate if any between-factors intensifying or attenuating effects are recognised or thought possible. Thirdly, to which extent the identified factors are malleable. Fourthly, a 'what-if' discussion about the increase, decrease, strengthening, or changing composition interventions towards any of the factors. The first two steps would strengthen generalisability if reported in leadership or work performance studies, and these implications are elaborated in the following sections on contributions and implications.

The full four-step would be applicable by practitioners. Doing so would help practitioners handle the fluidity of leadership context (Schreyögg and Sydow, 2010) and activate the individual interpretations, which is the basis for shared sense-making (Maitlis, 2005). In turn, this would allow practitioners, for example, a management team, to build shared language and schemes creating the necessary platform for effective organisational functioning (Luhmann, 1995). Moreover, it would allow the management team to engage in aligned sense-giving into their different parts of the organisation (Maitlis, 2005), further accelerating the emergence of shared schemes in and across teams. This recognition and handling of the fluidity of context are important because it is possible to imagine that certain contextual factor effects could be experienced helpful by some agents while experienced as hindering by other agents in the same leadership context. The trigger could be different expertise levels or different trait settings between team members attenuating or intensifying the contextual effects from internal complexity or other causal effects differently. Creating shared language makes it easier for the organisational members to address important causal contextual effects to the leader (Jepson, 2010).

In this sense, following the four-step approach could help build common ground and shared schemes reducing the ambiguity from interpretivist fluidity while accepting and benefiting from the inclusion of different perspectives that can be communicated due to a shared language (Jepson, 2010; Luhmann, 1995; Maitlis, 2005; Schreyögg and Sydow, 2010). This balance can increase team cohesion and, in turn, team performance (Berson et al., 2006; Mannix and Neale, 2005; Patel, Pettitt and Wilson, 2012). In continuation of the above discussion, the following compares the omnibus context and the discrete context investigated by Oc (2018) to the SLCF. As the first part of the omnibus context, Oc (2018) elaborates on *Where* as a contextual category summarising that extant research has primarily followed three paths to contextualising related to *Where*. That is by focusing on *National culture*; *Institutional forces* and *Markets*; or *Organisations*.

For *National culture*, Oc (2018) refers to both Hofstede (1980) and the GLOBE Study (House et al., 2002; House et al., 2004) and several studies applying these *National Culture* frameworks to explain contextual effects on leader and followers. The SLCF accommodates this with the Values composition and diversity in the intrinsic stratum, which also represents a framework for National cultures (Nardon and Steers, 2009). Oc (2018) exemplified that *Institutional forces* like women's representation in politics influence the base rates of gender distribution on corporate boards in different countries. Such institutional forces are beyond the explanatory power of the SLCF but could exercise influence on contextual factors in all SLCF strata. It indicates that the assumptions in SLCF of including factors exercising direct helping, hindering, or guiding effects are important to be aware of when applying SLCF. Moreover, an investigation of how the leadership context is nested within the society's institutional forces could be relevant in some studies.

Turning to contextual factors residing in the external environment, but exercising direct influence into the leadership context, Oc (2018) referred to *Market* competition as an example. SLCF provides an explanatory frame of reference with the factors in the determinant stratum in such instances. When turning to *Organisational* factors in the *Where* category Oc (2018) referred to studies applying the type of organisation as their contextualisation, for example, entrepreneurial, NGO, bureaucratic, public, private organisations or other classifications which are difficult to compare, which, in turn, limits the generalizability. SLCF offers a different path with the systemic factors, which allow comparing the 'organisational settings' in the leadership context across such different organisations by describing their context using the factors in the intentionality, systemic and social strata.

In the omnibus context as conceptualised by Johns (2006), the *Who* category is elaborated by Oc (2018) as pertaining to the sex composition and demographic diversity among the ones led. In the instance of sex composition, the evidence from extant studies referred by Oc (2018) displayed no clear findings of a causal effect on leadership or work performance. The SLCF does not encompass sex composition as no support for direct effects on leadership or work performance was identified in the reviewed literature. In addition, gender was mentioned only four times in all comments across round 1 and 2 in the Delphi study. Nonetheless, it could be an area for future research as a Google Scholar search for gender differences reveals literature across several streams which could be investigated, for example, leadership; work performance; teamwork; and collaboration (Google Scholar, 02 February 2021). The literature for demographic diversity referred by Oc (2018) pertains to educational background, nationality, and functional heterogeneity, which are factors covered in the intrinsic stratum of the SLCF. The *When* category pertains to either external events influencing the industry or society with an effect on the organisational functioning, such as a financial crisis or significant internal events, such as a merger or a new CEO (Johns, 2006; Oc, 2018). As for the institutional forces, such effects could result in knock-on effects manifesting themselves in the leadership context covered by the SLCF but are outside the coverage of the SLCF. As such understandings can be imperative in understanding research findings, it could be relevant to further consider a 'state' stratum in the pursuit of understanding leadership context.

In the discrete context category, Johns (2006) introduced three categories; *Task*, *Social* and *Physical*, while Oc (2018) added one more; *Temporal*. The *Task* category pertains primarily to task complexity and interdependence; both reported having well-warranted effects on leadership and work performance (Oc, 2018). These are well-covered in the SLCF. Interestingly, Oc (2018) reported one study concerned with whether tasks are masculine or feminine exercised an influence on the emergence of female leaders. While it does not warrant an immediate inclusion in the SLCF, it could indicate an interesting future research avenue related to the gender composition discussion above. In the *Social* category, the climates form the cornerstones in Oc's (2018) account, as also strongly represented in the SLCF. Interestingly, Oc (2018) highlights two contextual factors that could play into understanding the social leadership context: the centrality of an individual or team in the social network and the density or patterns of these networks. While climate strength is not addressed by Oc (2018), the social network approaches could promote understanding the inter-climate intensifying and attenuating effects.



When addressing *Physical context*, Oc (2018) focused on the hindering effects of physical distance and accounted for strong empirical support as also identified in the development of the SLCF. Interestingly, Oc (2018) included a *Temporal* category in line with the findings of Porter and McLaughlin (2006) in their seminal review. Oc (2018) reports empirical support for both helping and hindering effects of time pressure on leadership and work performance playing out in a curvilinear relationship. While these effects emerged in the development of the SLCF related to External dynamism and time pressure was mentioned by some panellists as having intensifying or attenuating effects on external complexity (H98; H15; L139); external dynamism (A124; A70; H81; L155); and the Climate for explorative learning (A160; L121; H98) it was not separated as an individual factor in the determinant stratum. Other authors also consider time pressure and timing as exercising a contextual influence; for example, Hannah et al. (2009) considered the location in time; before, under, after as having an influence on the level of extremity in their study of leadership in extreme contexts. Future research could further investigate time pressure as part of the leadership context, as intensifying effects could also be imagined related to Risk intensity and some climates, such as the climate for ethical conduct.

Oc (2018) concludes that:

*“I hope this review will encourage researchers to devote their efforts to heading towards uncharted territories of contextual leadership and produce research that is novel from both a theoretical and an empirical perspective”* (p. 230).

This thesis is such a contribution, and as the above comparison showed, this thesis operationalises the discrete context beyond that of Johns (2006) and Oc (2018) and adds to their understanding of leadership context. In the next sections, the study’s contributions are elaborated before limitations and further research are considered.

## **11.5 Contributions and implications**

In this section the contributions and implications from this thesis are summarised and discussed. Firstly, the contributions to theory are addressed as these naturally play into the contributions to practice discussed secondly. Thirdly, the section touches upon an important advice to future researchers and a methodological contribution. After this section future research is suggested.

### 11.5.1 Contributions to theory

There have been strong and long-lasting calls for putting leadership context in the centre of empirical studies. Osborn, Hunt and Jauch (2002, p. 799) argued:

*“...that leadership itself is embedded in its context. One cannot separate the leader(s) from the context any more than one can separate a flavour from food. We further contend that a leadership theory should specify the specific types of outcomes to be predicted in addition to the causal mechanisms underlying leadership, along with the boundary conditions for its applicability.”*

They illustrated steps towards meeting these criteria by exploring the interplay of leadership with a typology of four contexts categorised on their level of volatility and complexity: stability, crisis, dynamic equilibrium, and the edge of chaos (Osborn, Hunt and Jauch, 2002). Five years later, Avolio (2007) took stock of 100 years of leadership research and asked the question if leadership theories should start with a more integrative focus by including a broader array of potential contingencies. Avolio (2007) promoted more integrative strategies for leadership theory-building by pointing to the lack of inclusion of contextual variables in earlier and contemporary research and citing other authors who also proposed more integrative research. The same year Hunter, Bedell-Avers and Mumford undertook an evaluation of seven years of leadership research addressing assumptions made regarding context, concluding that *“the typical leadership study appears to ignore the context altogether”* (2007, p. 439).

This thesis provides more comprehensive answers to the criteria set forward by Osborn, Hunt and Jauch (2002); it enables the investigation of a broader array of contingencies suggested by Avolio (2007) and disseminating this thesis' results could contribute to a reduction of the contextual ignorance reported by Hunter, Bedell-Avers and Mumford (2007). The calls for more research into leadership context re-emerged when Dinh et al. (2014) undertook an extensive qualitative review of 13 years of leadership theory published across ten top-tier academic journals and considered contextual factors influencing leadership an *“under-researched topic”* given the impact context has on leadership (p. 41). Dinh et al. (2014) included a discussion of effectiveness and leadership outcomes throughout their review of theories. In this manner, Dinh et al. (2014) concurred with Porter and McLaughlin (2006) and Osborn, Hunt and Jauch (2002) that the inclusion of contextual parameters should be based on their influence on desired leadership outcomes. In continuation, the calls for more research into leadership context were repeated by Oc (2018), who followed up on the call from Johns (2006).

This thesis has put leadership context at the centre of an integrative literature review pulling disparate findings together, followed by an empirical modified Delphi study: together an approach suited for theory development. In turn, that provided a framework with the potential for increasing the understanding of the contextual impact on leadership, permeating the repeated calls. It follows that this study's most significant contribution to theory is a distinct framework for leadership context applicable for contextualising a range of theories about leadership and organisational functioning. For example, the SLCF could be applied for contextualising Complexity Leadership theory (Uhl-Bien, Marion and McKelvey, 2007), Followership theory (Uhl-Bien *et al.*, 2014), the Integrative Model of Leadership Behaviour (Behrendt, Matz and Göritz, 2016), the Full Range Leadership Theory (Bass, 1985) or Exemplary Leadership (Kouzes and Posner, 2006). Besides, it seems there are three additional significant contributions: 1) corroborating the importance and operationalising intentionality in leadership, 2) extending the leadership behaviour ranges of well-warranted leadership theories, and 3) extending existing contextual frameworks. These contributions and implications are further investigated in the coming sections.

#### *11.5.1.1 Corroborating the importance and operationalising intentionality in leadership*

Intentionality is an inherent part of leadership but rarely operationalised beyond the importance of having goals and goal-path clarity. For example, Full Range Leadership (Bass, 1985) where the goal focus in the transactional leadership style to some extent is short-termed. The main leadership interventions, contingent reward and management by exception, align with some of the characteristics important in exploitation (Raisch and Birkinshaw, 2008). In the transformational leadership style, the focus is more development-oriented and long-term, which align with the intention of improving the quality of the Human Capital (Yukl, 2008) and some of the characteristics of exploration (Raisch and Birkinshaw, 2008). With inspirational motivation, idealised influence, intellectual stimulation, and individualised consideration, transformational leadership seeks to maximise the return on human potential (Bass, 1985). Full Range Leadership is very focused on 'How', while the 'What' to achieve through leadership interventions is left to the leader. Full Range Leadership does not explicate the organisational intentions, which should serve as criteria for choosing which parts of the transactional-transformational leadership range are most conducive to these intentions.

As such, the Full Range Leadership Theory would be strengthened by application in conjunction with the suggested framework for leadership context. A similar pattern applies to another universal leadership theory: Exemplary Leadership (Kouzes and Posner, 2006) where a focus on the intended outcomes of leadership would strengthen the choices between the five leadership practices identified as best practices: Model the Way; Inspire a Shared Vision; Challenge the Process; Enable Others to Act; and Encourage the Heart. In continuation, leadership theories, which include some contextual factors and argue for a contingent response in the choice of leadership behaviour, can benefit from a stronger consideration of intentionality. For example, the contextual theory of leadership suggested by Osborn, Hunt and Jauch (2002) suggest a necessary requisite variety in the leadership behaviour matching demands and mitigating effects from variations in volatility and complexity; however, without considering intentionality. In theories including contextual factors like Osborn, Hunt and Jauch (2002), there seems to be an underlying assumption that 'fitting' the context allows choosing the most effective leader behaviour. However, Uhl-Bien, Marion and McKelvey (2007) emphasised that a leader can choose context-match or context-change behaviour depending on the purpose of leadership, an argument well supported in organisational adaptation research (Benner and Tushman, 2003; Jansen, Van den Bosh and Volberda, 2006; Lavie, Stettner and Tushman, 2010; Rosing, Frese and Bausch, 2011; Tushman and Benner, 2013). Besides contributing to informed contingent leadership choices guided by organisational intention, the SLCF can advance the context-match or -change awareness suggested by Uhl-Bien, Marion and McKelvey (2007).

In continuation, the factors in the intentionality stratum of SLCF operationalises the organisational determinants of financial performance influenced by leadership as suggested by Yukl (2008) in his flexible leadership theory; *Efficiency and Stability; Adaptation and Innovation, Human Capital and Relations*. That is, the integration of work performance behaviour ranges from the work performance literature (e.g. Koopmans *et al.*, 2011; Podsakoff *et al.*, 2000) and the intentionality derived from the organisational adaptation literature (e.g. March, 1991; Raisch and Birkinshaw, 2008) operationalises organisational intentions into work performance behaviour as desired outcomes of leadership. In turn, this specification of desired outcomes can guide the contingent choices of leadership behaviour. Pulling it together a review of effective leader behaviour included by significant authors (Behrendt, Matz and Göritz, 2016; DeRue *et al.*, 2011; Hamlin and Hatton, 2013; Higgs and Dulewicz, 2016; Kouzes and Posner, 2006; Yukl and Lepsinger, 2005) are juxtaposed to the intentions and the work performance literature reviewed in table 89 on the next page.

**Table 89. Operationalisation of intentionality and related leadership interventions**

<b>Organisational Intention</b>	<b>Work performance behaviour</b>	<b>Direct leadership interventions</b> Leadership behaviours warranted to influence work performance behaviour through direct agent-to-agent leadership intervention
<b>The intention to pursue exploitation and task performance.</b>	<ul style="list-style-type: none"> <li>• Planning own work to meet deadlines.</li> <li>• Prioritising the important tasks.</li> <li>• Working efficiently to spend time and resources optimally.</li> <li>• Work quantity.</li> <li>• Work quality.</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify roles and task objectives.</li> <li>• Monitor operations and performance.</li> <li>• Drive continuous improvement.</li> <li>• Plan and stick to plans.</li> <li>• Provide contingent rewards.</li> <li>• Resolve current operational problems.</li> </ul>
<b>The intention to pursue exploration and adaptive performance.</b>	<ul style="list-style-type: none"> <li>• Responding constructively and coping emotionally to change imposed.</li> <li>• Changing behaviours and ways of working.</li> <li>• Learning and applying new behaviour to adjust and develop performance.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the urgent need for change.</li> <li>• Articulate an inspiring vision.</li> <li>• Encourage experimentation to develop.</li> <li>• Facilitate collective learning.</li> <li>• Promote and implement change.</li> <li>• Balance competing priorities.</li> </ul>
<b>The intention to pursue human capital quality and contextual performance.</b>	<ul style="list-style-type: none"> <li>• Cooperating and helping others.</li> <li>• Displaying a positive attitude and encouraging others.</li> <li>• Protecting and supporting the organisation and its intentions.</li> <li>• Complying with organisational rules and procedures.</li> <li>• Taking the initiative, volunteering, and going above and beyond the call of duty.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide support and encouragement.</li> <li>• Recognise worthy contributions.</li> <li>• Provide coaching and mentoring.</li> <li>• Consult with others about decisions.</li> <li>• Empower and delegate.</li> <li>• Encourage cooperation and teamwork.</li> </ul>

Sources: A review of leadership behaviour ranges; see above. The work performance literature reviewed in this thesis.

As summarised above, the link from intention to leadership is a presumption strongly underpinning the SLCF. It allows the consideration of the contribution discussed in the following section: expanding the understanding of the leader behaviour ranges.

### 11.5.1.2 *Extending the leadership behaviour ranges of well-warranted leadership theories*

in continuation of the operationalisation of intentionality discussed in the previous section, an important contribution from this thesis pertains to the leadership interventions shaping context to promote these intentions. The literature review on leader interventions revealed an absence of the leader behaviour "establishing/influencing structures, systems and processes" in all behaviour ranges, except with Yukl and Lepsinger (2005). It could be considered if these leader behaviours are covered by "employing standardised processes" (Behrendt, Matz and Göritz, 2016, p. 237), "Initiating structure" (DeRue *et al.*, 2011, p. 16), "Effective planning and organising and proactive execution and control" (Hamlin and Hatton, 2013, p. 382), or "Resource management" (Higgs and Dulewicz, 2016, loc. 2326), however, the definitions set forward made no such inclusion. The absence of this behavioural category can be related to the approach where the reviewed authors rely on past research or define leadership narrowly to the dyad relation (Behrendt, Matz and Göritz, 2016; Dinh *et al.*, 2014; Hunter, Bedell-Avers and Mumford, 2007; Uhl-Bien, Marion and McKelvey, 2007). Interestingly, the somewhat separate literature strand on Substitutes of Leadership, which emerged decades ago, seems to have been integrated into the leadership ranges to a very limited extent. Kerr and Jermier (Jermier and Kerr, 1997; Kerr and Jermier, 1978) followed by other authors (Dionne *et al.*, 2005; Howell *et al.*, 1990; Keller, 2006) indirectly pointed to the relevance of the leader behaviour "establishing/influencing structures, systems and processes" with their research into Substitutes of Leadership. A review of these authors allowed extraction of leader behaviours that can influence the context, as summarised in table 90 below.

**Table 90. Shaping leadership interventions in Substitutes of Leadership theory**

- |   |
|---|
| <ul style="list-style-type: none"> <li>• Improve organisational formalisation, such as standard operating procedures, management-by-objectives, or code of conduct.</li> <li>• Develop a collegial system of guidance, such as self-managing teams, peer feedback, or whiteboard meetings.</li> <li>• Influence organisational structures, processes, systems, such as redesigning jobs, changing mandates, or leaning processes.</li> <li>• Optimise the composition of staff and competences, such as terminating and recruiting staff or acquiring access to specialised resources.</li> </ul> |
|---|

Derived from Dionne *et al.*, 2005; Howell *et al.*, 1990; Jermier and Kerr, 1997; Keller, 2006; Kerr and Jermier, 1978.

Juxtaposing the shaping interventions found in this thesis to these accounts on 'shaping leadership interventions' suggests that SLCF extends this understanding and can contribute to advancing the understanding of effective leader behaviour ranges by extending into the 'shaping context range'. In table 91 on the following page, the leadership interventions shaping context found in this thesis are juxtaposed to the operationalised intentions, i.e. work performance behaviour, and the related direct leadership interventions.

**Table 91. Leadership interventions shaping the context**

<b>Organisational Intention</b>	<b>Work performance behaviour</b>	<b>Direct leadership interventions</b>	<b>Leadership interventions shaping the context</b>
<b>The intention to pursue exploitation and task performance.</b>	<ul style="list-style-type: none"> <li>• Planning own work to meet deadlines.</li> <li>• Prioritising the important tasks.</li> <li>• Working efficiently to spend time and resources optimally.</li> <li>• Work quantity.</li> <li>• Work quality.</li> </ul>	<p>Leadership behaviours warranted to influence work performance behaviour through direct agent-to-agent leadership intervention</p> <ul style="list-style-type: none"> <li>• Clarify roles and task objectives.</li> <li>• Monitor operations and performance.</li> <li>• Drive continuous improvement.</li> <li>• Plan and stick to plans.</li> <li>• Provide contingent rewards.</li> <li>• Resolve current operational problems.</li> </ul>	<p>Interventions warranted in this study to influence work performance behaviour by shaping the leadership context.</p> <p>a) Increase or decrease centralisation; formalisation; internal complexity; interdependence; and, or resource constraints.</p> <p>b) Strengthen the climates for exploitative learning; explorative learning; change; diligence and discipline; goal-path clarity and stretch; service; collaboration; productive discussions; fairness and justice; empowerment; safety; and ethical conduct.</p> <p>c) Change composition and diversity of values, personalities and, or expertise.</p>
<b>The intention to pursue exploration and adaptive performance.</b>	<ul style="list-style-type: none"> <li>• Responding constructively and coping emotionally to change imposed.</li> <li>• Changing behaviours and ways of working.</li> <li>• Learning and applying new behaviour to adjust and develop performance.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the urgent need for change.</li> <li>• Articulate an inspiring vision.</li> <li>• Encourage experimentation to develop.</li> <li>• Facilitate collective learning.</li> <li>• Promote and implement change.</li> <li>• Balance competing priorities.</li> </ul>	
<b>The intention to pursue human capital quality and contextual performance.</b>	<ul style="list-style-type: none"> <li>• Cooperating and helping others.</li> <li>• Displaying a positive attitude and encouraging others.</li> <li>• Protecting and supporting the organisation and its intentions.</li> <li>• Complying with organisational rules and procedures.</li> <li>• Taking initiative, volunteering, and going above and beyond the call of duty.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide support and encouragement.</li> <li>• Recognise worthy contributions.</li> <li>• Provide coaching and mentoring.</li> <li>• Consult with others about decisions.</li> <li>• Empower and delegate.</li> <li>• Encourage cooperation and teamwork.</li> </ul>	

Sources: A review of leadership behaviour ranges; see above. The work performance literature reviewed in this thesis. This thesis' findings regarding shaping leadership context.



In continuation of the theoretical contribution concerning the shaping leadership interventions, the next section elaborates on the opportunities for extending existing contextual frameworks.

### *11.5.1.3 Extending existing contextual frameworks*

Some researchers have researched context as a central phenomenon, often with the causal effects in a narrow situation as the delineation criteria. For example, Antonakis and Atwater (2002) proposed a theory of leader distance. They suggested three independent dimensions of leader distance: leader-follower physical distance, perceived social distance, and perceived task interaction frequency. Hence, their proposed theory could be extended by investigating further the intensifying and attenuating effects from the other factors in the leadership context with knock-on effects to these three dimensions, for example, centralisation, the climate for collaboration or the climate for empowerment. Another example is Hannah et al. (2009), who developed a typology for extreme contexts. They included five components: the form of threat, the probability of consequences, the magnitude of consequences, physical or psychological–social proximity, and location in time. Moreover, they suggested psychological, social, and organisational resources as attenuators, but at a general level. Here, the SLCF could contribute to the extension of their theory, especially for the social and organisational resources, where factors like interdependence, the climate for empowerment, and the value composition and diversity could be relevant. The same pattern applies to their suggested intensifiers, where Hannah et al. (2009) suggested that time and complexity can intensify the contextual extremity. The SLCF could contribute to extending the Hannah et al. (2009) framework for examining the execution of leadership in extreme contexts with factors like external dynamism, resource constraints, or the climate for safety.

Similar opportunities for extending or further refining existing contextual frameworks exist within the climate literature, for example, the Organizational Climate Measure (Patterson et al., 2005), based upon Quinn and Rohrbaugh's Competing Values model (1983; 1981). The climate measure addresses four quadrants or climate categories and seventeen elements represented by each their scale; see table 92 below. An adjacent extension of Patterson et al.'s (2005) suggested theory of perceptions of the work environment would be nesting the climate measure within the social stratum of the SLCF.

A review of the 82 items in the scales indicates that such nesting would allow extending the theory into the climates for fairness and justice and the climate for ethical conduct. Moreover, nesting the organisational climate measure within the wider frame of SLCF holds the potential to extend the understanding of the antecedents to the climates measured. Finally, the climate strength conceptualisation in SLCF could potentially increase the theoretical strength of the Patterson et al. (2005) climate measurement, as the items and scales address expectation-, enactment-, alignment- and agreement-based strength, seemingly without any pattern.

**Table 92. The Organisational Climate Measure**

Human Relations quadrant	Open systems quadrant
<ul style="list-style-type: none"> <li>• Autonomy</li> <li>• Integration</li> <li>• Involvement</li> <li>• Supervisory support</li> <li>• Training</li> <li>• Welfare</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation and Flexibility</li> <li>• Outward Focus</li> <li>• Reflexivity</li> </ul>
Internal Process quadrant	Rational Goal quadrant
<ul style="list-style-type: none"> <li>• Formalisation</li> <li>• Tradition</li> </ul>	<ul style="list-style-type: none"> <li>• Clarity of organisational goals</li> <li>• Efficiency</li> <li>• Effort</li> <li>• Performance feedback</li> <li>• Pressure to produce</li> <li>• Quality</li> </ul>

Source: (Patterson *et al.*, 2005)

Another example of contributing to theory pertains to applying the SLCF in concert with well-established contextual frameworks, for example, Schein's Cultural model (Schein and Schein, 2017). Schein's model covers the visible artefactual level, socially validated espoused norms, and the overlap in the organisational members' mental maps (Schein and Schein, 2017). Applying the two frameworks together would allow SLCF adding the determinant and internationality strata to Schein's cultural model and thus operationalise the 'external world'. This could be an avenue for further refining the Schein's Culture model as the external world is contended to be the driver of culture emergence as an organisation finds its way of internal integration (Schein and Schein, 2017). Moreover, the SLCF offers a tangible framework for the factors exercising an influence at the artefactual, espoused norms, and underlying assumptions levels of Schein's model so a theoretical integration could further develop both frameworks.

In a similar vein, the SLCF holds the potential to contribute to the further advancement of Complexity Leadership Theory (Uhl-Bien and Marion, 2009; Uhl-Bien, Marion and McKelvey, 2007). Application of the SLCF in conjunction with the understandings of Complex Adaptive Systems could be a path to the operationalisation of the ever-balancing forces of the requisite variety argument underpinning complexity leadership theory (Osborn, Hunt and Jauch, 2002; Uhl-Bien, Marion and McKelvey, 2007). Naturally, more contextual frameworks exist, and as exemplified above, it seems relevant to investigate potential theoretical extensions and integrations in areas reaching into the leadership context by juxtaposing existing theories to the SLCF.

### **11.6.1 Contributions to practice**

It follows from the contributions to theory that the SLCF could increase the understanding of effective contextual leadership. That is relevant for anyone learning to lead, any leader entering a new context, any leader facing contextual changes, or any leader onboarding new team members. This constitutes this study's main contribution to practice, as the deliberate conversion to action of any leadership approach rests upon the agent's ability to exercise appropriate contingent leadership. That is, understanding the organisational intentions and related desired outcomes of leadership, the range of available leadership practices, their impact on the desired outcomes, and the contextual influences. In the following sections, the practical application of the SLCF and implications are discussed related to the three target groups intended as the beneficiaries of this study: Leaders, HR professionals, and Researchers.

#### *11.6.1.1 Implications for Leaders*

This Author assumed his first leadership position as a Non-Commissioned Officer (NCO) in a Tank Squadron in 1990. Before assuming the position, the NCO Academy had prepared the newly appointed NCOs by teaching and training the application of situational leadership (Blake and Mouton, 1972; Hersey, Blanchard and Johnson, 1969; Tannenbaum and Schmidt, 1958). In 1995, when collaborating with Polish forces in the Partnership for Peace programme, the cross-cultural collaboration was aided by Hofstede's cultural framework (1980). Since, as a leader in retail, heavy industry and professional service organisations, this Author has applied numerous frameworks aiding leadership. In essence, a leader's world is full of helpful frameworks that assist in understanding different parts of the leadership task.

However, no applied framework for leadership context has been identified over the past 30 years as a leader, 15 years in leadership consultancy, and five years in research. Providing such a framework aiding leaders in understanding their work is the main contribution of the SLCF, which can play out into three implications.

The first implication of applying the SLCF is that the leader could make more deliberate and informed choices about which leadership agency to enact. Moving into new contexts would be easier as the SLCF allows a faster exchange with members in the context about the context. Many companies have a set of leadership competencies used for expressing the expected leadership behaviours and a value code expressing the work performance behaviour expected from all employees. The SLCF can act in concert with such frameworks for senior leaders who need to understand how the leaders reporting to her need to adapt in their context. Leading an organisation across different functions and geographies often entails that effective leadership is different between parts of the organisation due to contextual differences. In essence, the SLCF is a frame for interpreting 'what is going on' by labelling factors and mechanisms aiding deciding which parts of the leadership behaviour ranges should be enacted most strongly.

Implication #2 concerns informed decisions and interventions to promote organisational performance by shaping the malleable context. This is the discussion in the leadership team about how formalisation, centralisation, selected climates, and team composition should be shaped to promote organisational intentions. An example is when the leader agrees with a leader in another department to establish an inter-department dependency, for example, a meeting structure or a regulated decision process to drive closer coordination and remove slack. Another example is when the climate for safety is strengthened to move from a compliance-based climate to a commitment-based safety climate to reduce workplace accidents.

In turn, implication #3 concerns mitigating hindering effects or leverage helping effects from immalleable contextual factors. This concerns the discussion about requisite responses to contextual demands from the external environment or a larger company context. For this purpose, the SLCF can aid a shared understanding and acceptance in the leader's organisation of the operating conditions and the necessary measures to mitigate or leverage the operating conditions. An example is developing well-rehearsed contingency measures enacted to mitigate the fluctuations in external dynamism, as seen in hospitals or military combat units. Another example is strengthening the climate for productive discussions and explorative learning to leverage an increasing external complexity, as seen in the online media industry.

### *11.6.1.2 Implications for HR Professionals*

Flowing from the main contribution of the SLCF, which is providing a frame for understanding context, there are two significant implications if using the SLCF as an HR Professional. One implication related to recruitment and talent development and one related to leadership development.

As the HR Manager for all central functions in the largest Danish Retail Group, Danish Supermarket Group, 2001-2003; and as the Global Head of Talent and Recruitment in a global manufacturer of Heating, Ventilation and Airconditioning, Danfoss, 2004-2006, this Author has worked intensively with recruitment. A recurring challenge was, and is, ensuring that the analysis of contextual demands is considered when assessing candidates.

The tools for assessing candidates' personality and cognitive abilities are highly advanced. That is not the case for tools suitable for analysing the contextual demands. Recruiters in large companies apply different tools for understanding the organisational context and the related leadership demands. For example, functional job descriptions, sometimes based on competency frameworks like the Korn Ferry Architect ([www.kornferry.com](http://www.kornferry.com)), the leadership pipeline concept (Charan, Drotter and Noel, 2000) or different position evaluation systems like Mercer ([www.mercer.com](http://www.mercer.com)). However, these represent fragmented approaches serving different purposes, yet recruiters use them to grasp the critical success factors in the jobs they are filling. The SLCF can provide a framework that can be utilised across all the company positions to understand the contextual demands. Besides recruitment, the SLCF can be used for optimising internal talent development programmes where the rotations that expose talent to different demands driving their development can become more informed using the SLCF.

Another main group of HR Professionals is leadership developers who design and deliver leadership training, coaching, leadership team development, or other interventions to improve leadership. Since 2007, this Author has been heading up People & Performance ([www.pphr.com](http://www.pphr.com)), a leadership development company. Over the past two years, parts of the emerging SLCF framework have been applied in different leadership interventions for clients led by this Author, hereunder the leadership academies for a range of international companies, for example, Unifeeder Group ([www.unifeeder.com](http://www.unifeeder.com)); Atos Medical ([www.atosmedical.com](http://www.atosmedical.com)); or ISS Facility Services ([www.issworld.com](http://www.issworld.com)). In continuation, an early version of the SLCF was applied by this Author for designing and implementing a structured coaching process driving faster performance for leaders entering new positions.

In 2017, the Harvard Business Review published the article *"Onboarding isn't enough"* (Byford, Watkins and Triantogiannis, 2017) based on a survey among 588 executives who had recently transitioned into new roles. The survey outlined five main challenges for leaders entering new roles; Assuming operational leadership; Taking charge of the team; Aligning with stakeholders; Engaging with the culture, and Defining strategic intent. From this offset, the early version of the SLCF was transformed into a five meeting, one for each stratum, coaching process to assist leaders in new roles overcoming these challenges. In December 2020, the forty-three recruitment and leadership development consultants in People & Performance and the parent company Compass Human Resources Group across Denmark, Norway, Finland, Sweden, and the United Kingdom were trained in the process. At the time of writing, March 2021, twelve such 'Performance Acceleration' processes have been sold and run with senior leaders in different companies. Moreover, the process has been implemented in two large companies through a train-the-trainer approach enabling their senior HR Business Partners to run the process. The traction evidences the applicability of SLCF.

### 11.6.1.3 Implications for Researchers

The offset for understanding the implications of applying SLCF when undertaking leadership research relates to the main contribution to practice: providing a frame of understanding context. However, it also relates to the contributions to theory as the SLCF opens new doors for researchers to investigate. As the contributions to theory were covered in the previous section, the focus in this section is on the potential benefits of applying SLCF for sensitising the understanding of context when designing leadership studies as the main implication for researchers. Osborn, Uhl-Bien and Milosevic (2013, p. 2), who explored the role context has played in the leadership research over the last one hundred years, argued: *"as the view of leadership shifts, so does the concept of context as well as the underlying causal mechanisms evoked and the nature of what is being explained or predicted."* Their discussion in the Chapter in *The Oxford Handbook of Leadership and Organisations* reflects the absence of a common reference frame regarding leadership context. Applying the SLCF to understand the contextual settings in which a leadership study is planned to be undertaken could remedy some of this variability in understanding context and, in turn, improve the transferability and generalizability. No matter if contextual variables are included in the study, the transferability of findings hinges on understanding the context in which the research was undertaken (Johns, 2017).

So, if a researcher accounted for the deliberate inclusion and exclusion of contextual factors, it would promote understanding the findings' transferability and generalisability. It follows that if researchers across different leadership views referred to a common frame of understanding when it comes to the leadership context, it would promote convergence across leadership perspectives. The SLCF contributes with steps in the direction towards a widely accepted frame of reference about leadership context.

### **11.7 Contributions to methodology**

The study was challenging from the outset, trying to tackle a multi-faceted phenomenon. Previously the leadership context had not been researched as a unified whole, but the extant literature categorised (Porter and McLaughlin, 2006); partially conceptualised at an overall level (Johns, 2006) or operationalised for selected parts (House *et al.*, 2004). The challenge led to the application of Critical Realism as an active lens in analysing the literature, which constitutes essential learning. As Schein and Schein (2017) stated, it is necessary to use a conceptual map of culture to bring order to complexity, and in a similar vein, this study learned that without a conceptual map, the endeavour seemed challenging to tackle. The development of the conceptual framework emerged by identifying the assumptions 'at play' in the reviewed leadership literature informed by Critical Realism (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019). It was only after struggling with making sense of the patterns in the literature that philosophy was drawn in to promote the thinking. Applying philosophy to promote the thinking was imperative and constitutes important advice for other researchers approaching complex matters. In turn, finding ways to research the complex and poorly demarcated phenomena led to operationalising an integrative research paradigm, which could contribute to future studies on the methodological side.

The contribution concerns operationalising the Critical Realist understanding of epistemic relativity, fallibilism and judgemental rationality (Bhaskar, 2018; Porpora, 2015) into an integrative research paradigm. The research paradigm rests upon what this study summarised as consensual truth, which concerns identifying the most valuable explanations about the world rather than absolute truth. Consensual truth offers a pathway for theorising complex matters as it relies on gaining its validity from the explanatory power agreed by many relevant actors. In this sense, the theoretical generalisations abducted from observed empirical causal effects (Ackroyd and Karlsson, 2014) were made possible by applying the integrative literature review method (Torraco, 2016).

The theoretical generalisations were further validated through the testing for fallibility (Bhaskar, 2018) and evaluation of the consensual truth of the proposed explanations (Porpora, 2015) with the Delphi method (Linstone and Turoff, 1975). Nowhere else has this research paradigm aligning the Critical Realism understandings of epistemic relativity, fallibilism and judgemental rationality with the methods of an integrative literature review and a Modified Delphi study been identified. Hence, it is suggested that the research paradigm is a contribution that can promote integrative research.

## **11.8 Limitations**

This section considers limitations related to the study besides the limitations to the study's outcomes addressed in the previous discussion.

### *11.8.1 Selection of literature*

The literature which formed the base for the integrative literature review was selected using citations for warranting the inclusion of impactful extant research (Dewett and Denisi, 2004; Podsakoff *et al.*, 2018) and keywords derived from the categories of literature emphasising context in leadership research by Porter and McLaughlin (2006). The approach resulted in the inclusion of nine strands of research: Work performance behaviour; Followership and shared leadership; Teams and collaboration; Organisational context and work design; Organisational culture and climate; Cross-cultural leadership and national cultures; Leadership effectiveness; Exploration, exploitation, and ambidexterity; and Leadership operationalised by different theories. Hence, the initial literature foundation was limited by the framing flowing from the categorisation of literature by Porter and McLaughlin (2006). The limitation was mitigated by tracking and inclusion of relevant literature; nevertheless, the starting frame is a limitation.

### *11.8.2 The integrative literature method and the theoretical framework*

The theoretical framework was developed through an integrative literature review (Torraco, 2016) using existing leadership literature to create new knowledge. The new knowledge in the form of the theoretical framework encompassed clustering of causal effects as the main method of ordering the knowledge into the contextual factors.



These factors, for example, in the social stratum, could have been conceptualised differently than the clusters emerging through the literature analysis, that is 1) Adaptive climates; 2) Performance climates; 3) Supportive climates; and 4) Protective climates, each comprising several climates. Within the groups, several climates pertaining to the same outcomes or processes were assessed to converge into the climates encompassed in the SLCF. As an example, the assessment of convergence between climates for performance (Dragoni, 2005; Jung *et al.*, 2009; Salas, Sims and Burke, 2005); for efficiency (Pawar and Eastman, 1997); and, for discipline (Raisch and Birkinshaw, 2008) led to the integration into the climate for diligence and discipline. Throughout the integrative literature review, the critical analysis, the assessment of patterning and convergence, and subsequent conceptualisation into factors relied on one coder, this Author, and the supervisors' subsequent review. Other authors developing contextual frameworks have done so by letting several coders code the same literature or empirical findings (House *et al.*, 2004; Patterson *et al.*, 2005; Porter and McLaughlin, 2006); a practice which would have strengthened this study.

### *11.8.3 The Delphi panel composition and the power of theoretical generalisation*

From a Critical Realist position, the study did not seek to generalise about populations but about theoretical propositions concerning certain phenomena (Danermark, Ekström and Karlsson, 2019; O'Mahoney and Vincent, 2014), leadership context. What made this possible was the abduction from the observed empirical causal effects in the reviewed literature to causal tendencies, which formed the basis for theoretical generalisation (Ackroyd and Karlsson, 2014). The theoretical generalisation was tested for fallibility through the Delphi study. Hence, the validity of the SLCF rests upon the process of judgemental rationality with each expert panellist (Bhaskar, 1998; Danermark, Ekström and Karlsson, 2019) and the power of the consensus inherent in the Delphi method (Brady, 2015; Keeney, Hasson and McKenna, 2011; Okoli and Pawlowski, 2004; Skinner *et al.*, 2015). Therefore, the composition of the panels imposes a limitation to the study; in particular, two dimensions can be considered to influence the judgemental rationality, warranting the validity of the study's findings. See chapter 10, results, for details on the panels. Firstly, across the panels, the gender distribution was skewed; for example, in round 2 across the panels, 73% of the panellist were men, and 27% were women. There is research supporting differences in leadership prototyping across genders (Paris *et al.*, 2009); hence it is likely that the gender distribution influenced the judgements.

Secondly, the panellists represented western thinking about leadership more strongly than Asian, African or Eastern Europe thinking; for example, no Chinese or Russian nationals were represented while 24 panellists were Danish nationals. The regional experience among the panellists mitigated the skewness a bit, for example, 18 panellists with experience from Asia and six with experience from Eastern Europe participated. Nevertheless, the cultural composition of the panellists remains an important limitation. The GLOBE project confirms significant differences in cultural assumptions about leadership (House *et al.*, 2002) and such differences in implicit prototyping could be expected to also play into the judgements of causal effects regarding leadership context. The theoretical generalisation could have been strengthened by further qualifying the judgemental rationality with a composition of panellists better balanced across genders and nationalities. In continuation, the study also investigated leadership context's effect on work performance, warranted by considering this the outcome of leadership. Nevertheless, the study did not include any panels comprising employees without leadership or HR responsibilities. It is possible that knowledge workers or manual workers, who have different work conditions, could have nuanced the hypothesised causal effects. The inclusion of one or more panels comprising workers could have added further to the findings' validity and offers an avenue for future research.

#### *11.8.4 The Delphi instrument*

The Delphi study was designed to verify the inclusion of contextual factors in the leadership context suggested from the integrative literature review, verify their identified causal effects; and, unearth other factors or causal effects. As discussed above, a presupposition emerging from the theoretical framework's development was that the helping and hindering effects are part of the same continuum. Hence, the formulation of the hypothesis about the causal effects departed from the more usual reduction of causal effects to 'one-effect' questions (Krosnick and Presser, 2010). Asking the panellists' level of agreement to a statement including the formulation "can help or hinder" led to remarks concerning asking double-barrelled questions from two panellists (L124; A127). Moreover, two panellists (H120; H114) commented that less complex or more finite statements would have been better, and H41 concurred, finding that the "*questions are complex and allow for a lot of individual interpretation.*" In sum, the survey's complexity did not seem to be a limitation; however, no analysis of dropouts or invited panellists who chose not to answer the survey was done. Hence, it could be considered if the size of the survey resulted in certain experts not participating.

### *11.8.5 The qualitative analysis*

One coder, this Author, undertook the qualitative analysis of the comments. The analysis served to confirm or contest the causal effects, for example, the presence of both 'helping' and 'hindering' effects, and that the causal effect exercises influence both the dependent variables, that is, 'leadership' and 'work performance'. Also, the comments were used for verifying the definitions by searching for remarks confirming or contesting the parts included in the definition. Besides relying on one coder, a limitation inherent in the design influenced the analysis, as leaving comments was voluntary. It follows, that only the comments left by the panellists could be analysed to confirm or contest the elements.

Such a limitation could have been remedied through triangulation with follow-up interviews or forcing commenting in the survey. However, as accounted for in the results section, confirmation was identified in the comments for all factors and mechanisms included in the SLCF.

## **11.9 Further research**

Warranted by this Chapter's above discussions, this section summarises three avenues for future research. It concerns further advancing the SLCF; contextualising leadership studies and theories; and contextualising contextual frameworks.

### *11.9.1 Advancing the Stratified Leadership Context Framework*

There are indications that a 'state' stratum should be investigated further to advance the understanding of leadership context. In this stratum, the state of crisis (Osborn, Hunt and Jauch, 2002), the time pressure (Oc, 2018), and significant recent events (Johns, 2006) could be explored further. Moreover, researching the indirect influences from institutional forces and other factors in the society could be a relevant extension affecting the base rates of the leadership context covered by the SLCF (Oc, 2018).

When it comes to the composition of staff in the leadership context, future research could further investigate if the influence from gender composition exercise causal effects warranting the inclusion in the leadership context. The increased attention in the literature and practical experience suggest that it would be relevant, and future research could confirm or contest this assumption. Also, further research expanding the verification of this study's findings by including more nationalities outside western leadership thinking and including knowledge and manual workers seems relevant given the discussion in this Chapter.

The existence of 'purpose-effects', which are helping and hindering causal effects flowing from experiencing a meaning with the work efforts, was indicated by the results related to the climate for service and the climate for sustainability. Future research could investigate if such 'purpose-effects' exists for climates centred around doing something for someone else. As discussed, these effects perhaps also exist for other climates, such as motivational climate in sports (Keegan *et al.*, 2011) or the Teaching and Learning dimensions in school climate (Thapa *et al.*, 2013). In continuation, the SLCF could be further advanced by tapping into research literature and areas not included in the 'management leadership' journals, for example, leadership in sports, in religious settings, or volunteer organisations.

### *11.9.2 Contextualising leadership studies and theories*

The SLCF opens an avenue for future research studies allowing a contextualisation when investigating leadership using one of the many established behavioural frameworks for leadership, such as Full Range Leadership (Bass, 1985) or Exemplary Leadership (Kouzes and Posner, 2006). Similarly, investigating how company frameworks for leadership competencies interact with the context as operationalised in the SLCF across functions and countries in global companies could represent an interesting avenue. It could be relevant to further research how the contextual factors, the causal mechanisms and the strength concepts from the SLCF would further promote the understanding of Complexity Leadership Theory (Uhl-Bien and Marion, 2009; Uhl-Bien, Marion and McKelvey, 2007). Such investigation could be undertaken in conjunction with the systemic dynamics from Complex Adaptive Systems. The intentionality underpinning leadership operationalised in this study opens two interesting avenues. Firstly, interdisciplinary research into the relations between leadership intentionality and work performance could promote the understanding of both leadership and work performance. Also, the many established leadership theories focused on 'what' a leader should do could be advanced further by including a more operationalised focus on the desired outcomes as presented in the intentionality stratum of the SLCF.

### *11.9.3 Contribute to the extension or contextualisation of existing contextual frameworks*

Several well-warranted contextual frameworks could be applied with parts of the SLCF to provide a more comprehensive understanding of the leadership context. That could be 'stand-alone' contextual frameworks like Schein's Cultural model (Schein and Schein, 2017); the Organisational Climate Measure (Patterson *et al.*, 2005); the framework for examining leadership in extreme contexts (Hannah *et al.*, 2009); or the leadership pipeline concept (Charan, Drotter and Noel, 2000). It could also be frameworks with contextual factors integrated as part of the framework, such as the Integrative Model of Leadership Behaviour (Behrendt, Matz and Göritz, 2016); the leader distance theory (Antonakis and Atwater, 2002) or the framework for leading effective change implementation (Higgs and Dulewicz, 2016). In turn, such application of the SLCF in conjunction with well-researched frameworks would most probably advance the SLCF significantly.

### **11.10 Closing remarks**

Leadership development to promote effective leadership that delivers on the company goals and strategies has been at the heart of this Author's job for the past twenty years. The MSc/DBA journey set out to solve a problem experienced time after time – determining the contextual demands to effective leadership to develop leaders best possible. Is the problem solved, and does the journey end with the close of this thesis?

Firstly, it is hard to capture the magnitude of leadership insight and the development in thinking about leadership context, which the MSc/DBA journey has given this Author. Secondly, this thesis comes to a close with a sense of gratitude to be allowed into the MSc/DBA in 2016 despite not meeting the admission criteria. Thirdly, it remains clear that the problem is not solved but that the SLCF is an important step in the right direction. Also, the personal development and insight into Academe motivate further endeavours into this world. The avenue ahead will include the dissemination of this thesis' findings, further research and hopefully also teaching in Academic settings in addition to consulting. The journey seems to have just begun as there is so much more to research, learn and teach.

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## Endnotes

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<sup>i</sup> Further cementing climate strength as fundamental to understanding climate are the virtues signifying a strong ethical climate identified by Kaptein (2008). The virtues were tested and confirmed in four interrelated empirical studies.

The virtues related to expectation-based strength are 1) clarity of normative expectations to conduct, and 2) discussability, i.e. the openness to discuss dilemmas or misconduct.

Related to enactment-based strength, Kaptein (2008) found the virtue of 3) feasibility, as pertaining to the extent to which the organisation creates conditions enabling compliance.

Aligning with alignment-based strength Kaptein (2008) reported three virtues: 4) congruence between normative expectations and management behaviour; 5) transparency, i.e. the degree to which the conduct and its consequences are observable; and, 6) sanctionability, referring to the likelihood of being rewarded or punished for expected behaviour or misbehaviour.

Finally, fitting in with agreement-based strength, Kaptein (2008) found that 7) supportability concerning the level of support among peers to meet normative expectations.

<sup>ii</sup> The supportive work context relates to how the leaders lead to promote creativity; how resources are allocated; how employees are evaluated and rewarded, and whether the climate is considered fair. Communicating creativity expectations is about how goals are set and how role requirements for creative effort and outcomes are established, and how desired behaviour is role modelled. The patterns of interaction pertain to how members interact internally and across boundaries and how diversity is orchestrated to promote creativity (Shalley and Gilson, 2004).

<sup>iii</sup> Comprising seven common dimensions: helping behaviour; sportsmanship; organisational loyalty; organisational compliance; individual initiative; civic virtue; and self-development (Podsakoff et al., 2000).

<sup>iv</sup> Podsakoff et al. (2000) summarised a range of potential reasons why OCB influence group and/or organisational performance. The summary contends that OCB may: enhance co-worker productivity; enhance active followership; free up managerial and organisational resources for more productive purposes; enhance social group functioning; help intergroup and in-group coordination; enhance attraction and retention of talent; enhance performance stability; and, enhance an organisation's ability to adapt to changes.

<sup>v</sup> The clusters identified in the content analysis of the reviewed literature aligns well with the propositions from Katz and Kahn (1978) also referenced by several authors in the reviewed literature. Katz and Kahn (1978) posited that organisational structures pertain to vertical differentiation, i.e. hierarchical levels, and horizontal differentiation, i.e. specialisation, as vital parts of designing organisations to have the requisite variety to the surrounding environment. These propositions align with the emergence of the clusters 1) Hierarchical level and 4) Internal complexity in the reviewed literature.

Related to differentiation-integration balance, Katz and Kahn (1978) pointed to centralization, i.e. the distribution of influence and mandate, and to the level of formalization, i.e. determined formal policies and routines, as influencing leadership. These propositions align with clusters 2) Centralization, and 3) Formalization.

Furthermore, Katz and Kahn (1978) pointed to the level of boundary-spanning activities in an organisation as related to leadership, highlighting the importance of understanding interdependence, while also pointing to the impact of resource munificence or constraints on work behaviour. These propositions align with clusters 5) Interdependence and 6) Resource constraints.

<sup>vi</sup> *The Core Operations subsystems*, named the production subsystems by Katz and Kahn (1978), concern the processes which produce the core deliverables tasked to the function, team, department or organisation. It influences leadership as leading a hospital department (Michie and West, 2004); a high-tech manufacturing company (Howard-Grenville, 2005); a fire unit (Antonakis, Avolio and Sivasubramaniam, 2003); or, a research and development team (Elkins and Keller, 2003), naturally triggers different leadership and task performance demands. Moreover, the leader's hierarchical level and the number of specialised jobs and functions interacting within the span of the leader's control influence the complexity in the leadership context (Katz and Kahn, 1978).

*The Inflow/Outflow subsystems*, termed the supportive subsystems by Katz and Kahn (1978), pertaining to the transactions of input, be that information or raw material, necessary for the core operation; and to the transactions of output to the receivers of the department's core deliverables, be that semi-finished or finished information, products or services. In the reviewed literature the influence on work performance and leadership relates to the coordination and collaborative performance across organisational boundaries (Hogg, Van Knippenberg and Rast, 2012a; Patel, Pettitt and Wilson, 2012) and the workflow interdependencies (Hogg, Van Knippenberg and Rast, 2012a; Howard-Grenville, 2005).

*The Human Resource subsystems* that are the most relevant subsystems to leadership context within the maintenance subsystems. Katz and Kahn (1978) describe the subsystem as maintaining the performance capacity of the 'equipment', hereunder people, running the core operations. Tracking authors from Michie and West's (2004) article on the links between organisational practices and performance illustrates the rise of High Performance Work Practices (HPWP) in research (Combs et al., 2006; Huselid, 1995). HPWP concern the formal HR practices regarding recruitment; talent management; training; compensation and benefits; performance appraisal; promotions; procedures for airing grievances; and other company HR standards (Combs et al., 2006; Huselid, 1995; Michie and West, 2004).

*The Business Development subsystems*, discussed as the adaptive subsystems by Katz and Kahn (1978), relate to the practices that secure adaptation of the requisite variety, i.e. scanning and reacting to the significant changes in the external environment; and, to the changes and innovations which are driven from within. In the reviewed literature the research into exploration and ambidexterity extends strong support to the influence of this subsystem on leadership (Benner and Tushman, 2003; Birkinshaw and Gibson, 2004; Boumgarden, Nickerson and Zenger, 2012; Coglisier and Schriesheim, 2000; Lavie, Stettner and Tushman, 2010; Raisch and Birkinshaw, 2008). The centrepiece revolves around understanding which processes secure learning and change, which create new competencies, services, products or, significantly change existing core operations.

*The Business Management subsystem*, called the managerial subsystem by Katz and Kahn (1978), pertains to the management practices of strategizing, planning, budgeting, reporting, resource prioritisation, project management (Avolio et al., 2004b; Carroll, Levy and Richmond, 2008; Lavie, Stettner and Tushman, 2010; Michie and West, 2004) and other organised activities for coordinating, controlling and directing the different subsystems (Katz and Kahn, 1978). The influence on leadership context depends on the formalization, centralization of the governance, extent of management practices, and the hierarchical level the leader operates at.

<sup>vii</sup> Kaiser and Craig (2011) found that supportive leadership negatively predicted supervisor (lowest level) effectiveness, while it positively predicted middle manager effectiveness, while no relation to the effectiveness of executives was found. For supervisors, they found no predictive power of empowering nor directive leadership, but as they pointed out; this may be due to a small supervisor sample (Kaiser and Craig, 2011). Middle Managers exercising more directive and less empowering leadership were more effective; while the picture for executives was that more empowerment and less directive leadership was found most conducive.

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<sup>viii</sup> Interestingly, creativity is reported by some authors to be negatively related to high formalization (Andriopoulos, 2001; Shalley and Gilson, 2004). Andriopoulos (2001) identified drivers of creativity from extant literature encompassing low levels of rules, regulation and job specification (formalization), evaluation and reward systems focused on creative behaviour, and, low levels of organisational politics which distract the focus from the work purpose. However, von Krogh, Nonaka and Rechsteiner's (2012) findings indicate that it is not formalization as such which hinders exploration, but the alignment between which processes are formalized and the organisational intent which is key.

<sup>ix</sup> Raisch and Birkinshaw (2008) suggest specialising through spatial separation and creation of parallel structures. Spatial separation pertains to fitting the organisational design to either exploration or exploitation, and thereby building 'buffering' (Lavie, Stettner and Tushman, 2010) into fixed structures and processes separating exploitative and explorative processes. Parallel structures represent a more contingent approach where temporal or domain separation allows people in an organisational unit for a period or for a specified domain to apply the form of organising, e.g. project teams or communities, fitting the purpose best (Raisch and Birkinshaw, 2008).

<sup>x</sup> Such change could encompass shifting from exploitative towards explorative practices, but could also encompass staff reductions, implementation of new technology, organisational changes, in- or outsourcing and a range of other changes influencing organisational members without pertaining to a shift between the learning modes.

<sup>xi</sup> Salas, Sims and Burke (2005) posit that the importance of a climate for diligence and discipline increase in stressful task settings; when team members are overloaded; and, when one or more team members are unaware of their deficiencies. Supporting the attenuating and intensifying effects between climates, Salas, Sims and Burke (2005) identified two pre-requisites to effective mutual performance monitoring: enough shared understanding of the team's task and team member responsibilities, i.e. common ground; and, enough open, cohesive and trusting climate allowing team members to keep tabs of each other, i.e. a strong climate for collaboration.

<sup>xii</sup> When it comes to how service climate influences the service quality delivered, it revolves around two related customer experience perceptions: customer satisfaction and customer loyalty. These are in turn related to the customer's propensity to buy again and recommend the product, service or company (Bowen and Schneider, 2013; Heskett et al., 1994; Hong et al., 2013; Yagil, 2014).

<sup>xiii</sup> Building on Spreitzer, de Janasz and Quinn (1999) Avolio et al. (2004b) defined psychological empowerment to encompass four cognitions: Competence, concerning the feeling of self-efficacy; Impact, as the extent to which a person believe that own effort influence organisational outcomes; Meaning, being the individual's ascription of value to own work; and Choice, representing the felt autonomy in own work.

<sup>xiv</sup> Avolio et al. (2004b) reported from extant literature that transformational leaders foster empowerment among followers by displaying integrity; exhibiting high moral standards; conveying optimism; challenging to find new ways; recognising followers beliefs, values and mindset; encouraging creative approaches to work and problem-solving; coaching and mentoring; providing feedback; facilitating development of follower potential; providing decision mandate, widening responsibilities, and giving opportunities for work challenges.

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<sup>xv</sup> Zohar (2008) emphasised psychological ownership, i.e. feeling a personal responsibility for tools, patients, tasks, resources, or processes as intensifying the commitment-based safety climate. The ownership feeling relates to the active orientation flowing from psychological empowerment (Spreitzer, de Janasz and Quinn, 1999) and underlines the intensifying effects of a strong climate for empowerment to the safety climate.

<sup>xvi</sup> Emphasising collective sensemaking as an essential mechanism, Baran and Scott (2010) identified three sensemaking processes: 1) Framing processes, 2) Heedful interrelating processes, and 3) Adjusting processes.

1) Framing processes are the mutual clarification of what is significant in the context and a key driver in creating a common focus as the basis for attention, interpretation of context cues, choice of approach, and application of experience (Baran and Scott, 2010). Policies, procedures, and authority were found to act as framing processes, which corresponds well with expectation-, and alignment-based strength.

2) Heedful interrelating processes is the communicative practice of engaging in sensemaking, i.e. building, testing and amending shared assumptions regarding the context's danger and risks. It is about the practice of aligning perceptions, being 'on the same page', and communicating to reduce ambiguity and uncertainty stemming from different interpretations (Baran and Scott, 2010), corresponding well with agreement-based strength.

3) Adjusting processes pertains to the mutual adjustment of behaviour based on the awareness and judgement of the situation as it evolves. It pertains to flexible reactions to immediate threats and unexpected events, alternating courses of action when the situation changes (Baran and Scott, 2010), which highlights the mitigative effects of agency towards causal effects of contextual factors.

<sup>xvii</sup> The GLOBE Project identified six global leadership dimensions: Charismatic/Value-Based, Team-Oriented, Participative, Humane-Oriented, Autonomous, and Self-Protective (Javidan et al., 2006a) with an underlying set of descriptors contributing or inhibiting to 'outstanding' leadership (GLOBE, 2019).

<sup>xviii</sup> The reconciliation process is a centrepiece in several practitioner cross-cultural frameworks, suggesting concrete approaches to building 'third-way solutions' (Gundling, Hogan and Cvitkovich, 2011; Gundling, 2003) or to reconcile the conflicting values in a team (Hampden-Turner and Trompenaars, 2000; Trompenaars and Hampden-Turner, 2012).

<sup>xix</sup> Kluckhohn and Strodtbeck (1961) introduced four value orientations confirmed through a study of communities in the southwestern part of USA. The four dimensions pertained man-nature relations (achieving mastery over nature, in harmony with nature, subordinated to nature), temporal focus (past, present, or future), activity orientation (being, doing, being-in-becoming), and relational orientation (lineal, individualist, collateral).

<sup>xx</sup> Trompenaars held a firm focus on the workplace and the effect of conflicting values in these settings (1993). Trompenaars and Hampden-Turner (2012) conceptualised cultural values along six dimensions: universalism-particularism; individualism-universalism; specificity-diffuseness; achieved-ascribed status; inner-outer direction; sequential and synchronous time orientation. Hampden-Turner and Trompenaars draw upon dilemma theory and argue that reconciling values is a path to effective leadership and collaboration (2000).

<sup>xxi</sup> Schwartz (1992) published extensive work on value differences in a wider context than the workplace. Schwartz (1992; 1999; 2012) discriminates ten values: Self-Direction; Stimulation; Hedonism (pleasure-seeking); Achievement; Power; Security; Conformity; Tradition; Benevolence; and, Universalism. Schwarz (2012) considers these ten values as competing priorities and as such, concur with the above-mentioned cultural value models that all dimensionalise values.



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<sup>xxii</sup> Nardon and Steers (2009) argue that ontologically there is convergence across the models, while they recognise the epistemological differences in the way dimensions are operationalised. They look beyond the 'turf wars' and argue that the focus should be on convergence rather than divergence (Nardon and Steers, 2009) much in line with what has happened in the climate-culture discussion (Denison, 1996; Schneider, Ehrhart and Macey, 2013).

<sup>xxiii</sup> Hall (1981) proposed an anthropological model focused on national cultural differences on communication style, the comfort of sharing physical space, and concept of time (precise or relative).

<sup>xxiv</sup> Each of the Big Five personality dimensions comprises six facets as conceptualised by Costa and McCrae (1992), while other authors and instruments operationalise in fewer or more facets (John, Naumann and Soto, 2010).

Neuroticism, or emotional stability, includes anxiety, depression, hostility, impulsiveness, self-consciousness, and vulnerability (Costa and McCrae, 1992). Neuroticism pertains to the lack of emotional stability and even-temperedness driven by negative emotionality with feelings like anxiety, nervousness, sadness and tenseness (John, Naumann and Soto, 2010).

Extraversion is characterised by warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions (Costa and McCrae, 1992). Extraversion implies an energetic interaction with the social and material world and encompasses traits like assertiveness, sociability, activity, and positive emotionality (John, Naumann and Soto, 2010).

Openness includes openness to fantasy, aesthetics, feelings, actions, ideas, and values (Costa and McCrae, 1992). This dimension describes the originality, complexity, depth and breadth of a person's experiential and mental life (John, Naumann and Soto, 2010).

Agreeableness includes altruism, compliance, modesty, straightforwardness, tender-mindedness, and trust (Costa and McCrae, 1992). Agreeableness pertains prosocial and communal orientation in the approach to others, encompassing traits like trust, tender-mindedness, modesty and altruism (John, Naumann and Soto, 2010).

Conscientiousness includes achievement striving, competence, deliberation, dutifulness, order, and self-discipline (Costa and McCrae, 1992). This dimension is about socially prescribed control over impulses, i.e. delaying gratifications, thinking before acting, being attentive to and following norms and rules, and organising, planning and prioritising tasks (John, Naumann and Soto, 2010).

<sup>xxv</sup> One early indication of the interplay between trait activation, context and job performance came from Barrick and Mount (1991) in their meta-analysis of the Big Five and job performance. They investigated the relation of the Big Five to job productivity data, turnover/tenure, status change and salary across five occupational groups. They found that all five dimensions of the Big Five were related in differing degree across criteria and occupational groups; however, also that conscientiousness was consistently found to predict high performance. Besides their findings, Barrick and Mount (1991) reported five other studies supporting conscientiousness as a valid predictor of task performance due to traits as being planful, persistent, hardworking, careful, thorough. The study confirmed the relevance of all five traits and indicated an interaction with other contextual factors.

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<sup>xxvi</sup> Tett and Burnett (2003) concluded that personality influences job performance, and that a given trait's value for job performance is situationally specific. Through an extensive literature review, Tett and Burnett (2003) suggested a personality trait-based model of job performance, which besides the Big Five, built upon existing taxonomies of vocational personality types (Holland, 1985); workgroup types (Sundstrom, 1999); and, organisational climate (O'Reilly, Chatman and Caldwell, 1991). Tett and Burnett (2003) reported empirical evidence for the effect of each these contextual frameworks upon trait activation warranting their proposed model. Besides confirming that all trait standings hold causal powers which manifest themselves depending on the organisational, social and task context, they did not address the effects of trait-diversity among team members.

However, they did address the impact of weak versus strong situations. Tett and Burnett (2003) built upon extant research to posit that the situation strength comprises two elements. Firstly, a situation's trait relevance, i.e. how many cues does a situation offer which makes a given trait activation relevant. Secondly, its trait strength, i.e. how much a situation demands particular behaviour, e.g. leaving a burning building fast.

<sup>xxvii</sup> Judge and Zapata (2015) developed a theoretical model for the person-situation interaction and tested hypothesis related to both situational strength and trait manifestation. Judge and Zapata (2015) drew upon Meyer, Dalal and Hermida (2010) who proposed that situation strength comprise four aspects: 1) clarity of job responsibilities; 2) consistency pertaining the absence of competing job responsibilities; 3) constraints as the extent to which the job limits freedom in decision-making or action; and, 4) consequences, i.e. the level of significant implications for relevant stakeholders of the job holder's actions and decisions.

## Appendix A. The articles reviewed by Porter and McLaughlin (2006)

Articles included in Porter and McLaughlin (Porter and McLaughlin, 2006) review of 16-years of leadership and organisational context. Porter and McLaughlin (Porter and McLaughlin, 2006) reviewed articles published in 21 major journals in the period 1990-2005 including: Domestic OB and management journals included: Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Journal of Applied Psychology, Journal of Organizational Behavior, Journal of Management, Organizational Behavior and Human Decision Processes, The Leadership Quarterly, Organization Science, and Personnel Psychology. International journals included: Journal of Management Studies, British Journal of Management, Work and Organizational Psychology, Organization Studies, Journal of International Business, Management International Review, and Human Relations. Sociological journals included: American Sociological Review. American Journal of Sociology, Social Science Quarterly, and Journal of Social Issues. (Porter and McLaughlin, 2006, 561) The ordering of articles in the table below reflects the categorisation in the Porter and McLaughlin's (2006) review.

Category	Article included by Porter & McLaughlin with moderate-to-strong emphasis on context
<b>Culture/ Climate</b>  Conceptual articles	<p>Avolio, B. J., Kahai, S. &amp; Dodge, G. E. (2000). E-Leadership: Implications for Theory, Research, and Practice. <i>The Leadership Quarterly</i>, 11(4), 615-668.</p> <p>Bess, J. L. &amp; Goldman, P. (2001). Leadership ambiguity in universities and K–12 schools and the limits of contemporary leadership theory. <i>The Leadership Quarterly</i>, 12, 419-450.</p> <p>Davis, W. D. &amp; Gardner, W. L. (2004). Perceptions of politics and organizational cynicism: An attributional and leader–member exchange perspective. <i>The Leadership Quarterly</i>, 15(4), 439-465.</p> <p>Hambrick, D. C., Finkelstein, S. &amp; Mooney, A. C. (2005). Executive Job Demands: New Insights for Explaining Strategic Decisions and Leader Behaviors. <i>The Academy of Management Review</i>, 30(3), 472-491.</p> <p>Hunt, J. G. &amp; Ropo, A. (1995). Multi-Level Leadership: grounded Theory and Mainstream Theory applied to the Case of General Motors. <i>The Leadership Quarterly</i>, 6(3), 379-412.</p> <p>Mumford, M. D., Scott, G. M., Gaddis, B. H. &amp; Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. <i>The Leadership Quarterly</i>, 13, 70-750.</p> <p>Pawar, B. S. &amp; Eastman, K. K. (1997). The Nature and Implications of Contextual Influences on Transformational Leadership: A Conceptual Examination. <i>The Academy of Management Review</i>, 22(1), 80-109.</p> <p>Scandura, T. &amp; Lankau, M. J. (1996). Developing Diverse Leaders: A Leader-Member Exchange Approach. <i>The Leadership Quarterly</i>, 7(2), 243-263.</p>

<p><b>Culture/ Climate</b></p> <p>Conceptual articles, continued</p>	<p>Shamir, B. &amp; Howell, J. M. (1999). Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(2), 257-283.</p> <p>Trice, H. M. &amp; Beyer, J. M. (1991). Cultural Leadership in Organizations. <i>Organization Science</i>, 2(2), 149-169.</p> <p>Waldman, D. A. (1993). A Theoretical Consideration of Leadership and Total Quality Management. <i>The Leadership Quarterly</i>, 4(1), 65-79.</p>
<p><b>Culture/ Climate</b></p> <p>Empirical articles</p>	<p>Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of Unit-Level organizational citizenship behavior. <i>Personnel Psychology</i>, 57, 61-94.</p> <p>Howell, J. M. &amp; Avolio, B. J. (1993). Transformational Leadership, Transactional Leadership, Locus of Control, and Support for Innovation: Key Predictors of Consolidated-Business-Unit Performance. <i>Journal of Applied Psychology</i>, 78(6), 891-902.</p> <p>Jung, D. I., Chow, C. &amp; Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. <i>The Leadership Quarterly</i>, 14, 525-544.</p> <p>Morrison, E. W. &amp; Phelps, C. C. (1999). Taking Charge at Work: Extrarole Efforts to Initiate Workplace Change. <i>The Academy of Management Journal</i>, 42(4), 403-419..</p> <p>Yagil, D. (1998). Charismatic Leadership and Organizational Hierarchy: Attribution of Charisma to Close and Distant Leaders. <i>The Leadership Quarterly</i>, 9(2), 161-176.</p>
<p><b>Goals and Purposes</b></p> <p>Conceptual</p>	<p>Shamir, B. &amp; Howell, J. M. (1999). Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(2), 257-283.</p>
<p><b>Goals and Purposes</b></p> <p>Empirical articles</p>	<p>De Hoogh, A. H. B., Den Hartog, D. N., Koopman, P. L., Thierry, H., Van den Berg, P. T., Van der Weide, J. G. &amp; Wilderom, C. P. M. (2005). Leader motives, charismatic leadership, and subordinates' work attitude in the profit and voluntary sector. <i>The Leadership Quarterly</i>, 16(1), 17-38.</p> <p>Egri, C. P. &amp; Frost, P. J. (1994). Leadership for environmental and social change. <i>The Leadership Quarterly</i>, 5(3/4), 195-200.</p> <p>Keller, R. T. (1992). Transformational Leadership and the Performance of Research and Development Project Groups. <i>Journal of Management</i>, 18(3), 489-501.</p> <p>Pastor, J.-C., Meindl, J. R. &amp; Mayo, M. C. (2002). A Network Effects Model of Charisma Attributions. <i>The Academy of Management Journal</i>, 45(2), 410-420.</p> <p>Waldman, D. A., Lituchy, T., Copalakrishnan, M., Laframboise, K., Calperin, B. &amp; Kaltsounakis, Z. (1998). A Qualitative Analysis of Leadership and Quality Improvement. <i>The Leadership Quarterly</i>, 9(2), 177-201.</p>

<p><b>People/ composition</b></p> <p>Conceptual articles</p>	<p>Hooijberg, R. &amp; DiTomaso, N. (1996). Leadership in and of Demographically Diverse Organizations. <i>The Leadership Quarterly</i>, 7(1), 1-19.</p> <p>Klein, K. J. &amp; House, R. J. (1995). On Fire: Charismatic Leadership and Levels of Analysis. <i>The Leadership Quarterly</i> 6(2), 183-198.</p> <p>Mumford, M. D., Scott, G. M., Gaddis, B. H. &amp; Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. <i>The Leadership Quarterly</i>, 13, 705-750.</p> <p>Scandura, T. &amp; Lankau, M. J. (1996). Developing Diverse Leaders: A Leader-Member Exchange Approach. <i>The Leadership Quarterly</i>, 7(2), 243-263.</p>
<p><b>People/ composition</b></p> <p>Empirical articles</p>	<p>Cliff, J. E., Langton, N. &amp; Aldrich, H. E. (2005). Walking the Talk? Gendered Rhetoric vs. Action in Small Firms. <i>Organization Studies</i>, 26(1), 63-91.</p> <p>Elron, E. (1997). Top Management teams within multinational corporations: Effects of cultural heterogeneity. <i>The Leadership Quarterly</i>, 8(4), 393-412.</p> <p>Lucas, J. W. (2003). Status Processes and the Institutionalization of Women as Leaders. <i>American Sociological Review</i>, 68(3), 464-480.</p> <p>Mayo, M. C., Pastor, J.-C. &amp; Meindl, J. R. (1996). The Effects of Group Heterogeneity on the Self-Perceived Efficacy of Group Leaders. <i>The Leadership Quarterly</i>, 7(2), 265-284.</p>
<p><b>Processes</b></p> <p>Conceptual articles</p>	<p>Avolio, B. J., Kahai, S. &amp; Dodge, G. E. (2000). E-Leadership: Implications for Theory, Research, and Practice. <i>The Leadership Quarterly</i>, 11(4), 615-668..</p> <p>Pawar, B. S. &amp; Eastman, K. K. (1997). The Nature and Implications of Contextual Influences on Transformational Leadership: A Conceptual Examination. <i>The Academy of Management Review</i>, 22(1), 80-109.</p> <p>Waldman, D. A. (1993). A Theoretical Consideration of Leadership and Total Quality Management. <i>The Leadership Quarterly</i>, 4(1), 65-79.</p>
<p><b>Processes</b></p> <p>Empirical articles</p>	<p>Maitlis, S. (2005). The Social Processes of Organizational Sensemaking. <i>The Academy of Management Journal</i>, 48(1), 21-49.</p> <p>Tyler, T. R. &amp; De Cremer, D. (2005). Process-based leadership: Fair procedures and reactions to organizational change. <i>The Leadership Quarterly</i>, 16, 529-545.</p> <p>Whittington, L. J., Goodwin, V. L. &amp; Murray, B. (2004). Transformational leadership, goal difficulty, and job design: Independent and interactive effects on employee outcomes. <i>The Leadership Quarterly</i>, 15, 593-606.</p> <p>Zhu, W., Chew, I. K. H. &amp; Spangler, W. D. (2005). CEO transformational leadership and organizational outcomes: The mediating role of human-capital-enhancing human resource management. <i>The Leadership Quarterly</i>, 16, 39-52.</p>

<p><b>State/ condition</b></p> <p>Conceptual articles</p>	<p>Bess, J. L. &amp; Goldman, P. (2001). Leadership ambiguity in universities and K–12 schools and the limits of contemporary leadership theory. <i>The Leadership Quarterly</i>, 12, 419-450.</p> <p>Boal, K. B. &amp; Hooijberg, R. (2000). Strategic Leadership Research: Moving On. <i>The Leadership Quarterly</i>, 11(4), 515-549.</p> <p>Choi, Y. &amp; Mai-Dalton, R. R. (1998). On the Leadership Function of Self-sacrifice. <i>The Leadership Quarterly</i>, 9(4), 475-501.</p> <p>Eggleston, K. K. &amp; Bhagat, R. S. (1993). Organizational Contexts and Contingent Leadership Roles: A Theoretical Exploration. <i>Human Relations</i>, 46(10), 1177-1192.</p> <p>Hunt, J. G. &amp; Ropo, A. (1995). Multi-Level Leadership: grounded Theory and Mainstream Theory applied to the Case of General Motors. <i>The Leadership Quarterly</i>, 6(3), 379-412.</p> <p>Shamir, B. &amp; Howell, J. M. (1999). Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(2), 257-283.</p>
<p><b>State/ condition</b></p> <p>Empirical articles</p>	<p>Alexander, J. A., Fennell, M. L. &amp; Halpern, M. T. (1993). Leadership Instability in Hospitals: The Influence of Board-CEO Relations and Organizational Growth and Decline. <i>Administrative Science Quarterly</i>, 38(1), 74-99.</p> <p>Denis, J.-L., Lamothe, L. &amp; Langley, A. (2001). The Dynamics of Collective Leadership and Strategic Change in Pluralistic Organizations. <i>The Academy of Management Journal</i>, 44(4), 809-837.</p> <p>Green, S. G., Anderson, S. E. &amp; Shivers, S. L. (1996). Demographic and Organizational Influences on Leader–Member Exchange and Related Work Attitudes. <i>Organizational Behavior and Human Decision Processes</i>, 66(2), 203-214.</p> <p>Groves, K. S. (2005). Linking Leader Skills, Follower Attitudes, and Contextual Variables via an Integrated Model of Charismatic Leadership. <i>Journal of Management</i>, 31(2), 255-277.</p> <p>Hunt, J. G., Boal, K. B. &amp; Dodge, G. E. (1999). The Effects of Visionary and Crisis-Responsive Charisma on Followers: An Experimental Examination of Two Kinds of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(3), 423-448.</p> <p>Scully, J. A., Sims, H. P. J., Olian, J. D., Schnell, E. R. &amp; Smith, K. A. (1994). Tough Times Make Tough Bosses: A Meso Analysis of CEO Leader Behavior. <i>The Leadership Quarterly</i>, 5(1), 59-83.</p>
<p><b>Structure</b></p> <p>Conceptual articles</p>	<p>Antonakis, J. &amp; Atwater, L. E. (2002). Leader distance: a review and a proposed theory. <i>The Leadership Quarterly</i>, 13(6), 673-704.</p> <p>Avolio, B. J. &amp; Bass, B. M. (1995). Individual Consideration Viewed at Multiple Levels of Analysis: A Multi-Level Framework for Examining the Diffusion of Transformational Leadership. <i>The Leadership Quarterly</i>, 6(2), 199-218.</p> <p>Balkundi, P. &amp; Kilduff, M. (2006). The ties that lead: A social network approach to leadership. <i>The Leadership Quarterly</i>, 17(4), 419-439.</p> <p>Hunt, J. G. &amp; Ropo, A. (1995). Multi-Level Leadership: grounded Theory and Mainstream Theory applied to the Case of General Motors. <i>The Leadership Quarterly</i>, 6(3), 379-412.</p>

<p><b>Structure</b></p> <p>Conceptual articles, continued</p>	<p>Hunt, J. G., Boal, K. B. &amp; Sorensen, R. L. (1990). Top Management Leadership: inside the Black Box. <i>The Leadership Quarterly</i>, 1(1), 41-65.</p> <p>Klein, K. J. &amp; House, R. J. (1995). On Fire: Charismatic Leadership and Levels of Analysis. <i>The Leadership Quarterly</i> 6(2), 183-198.</p> <p>Mumford, M. D., Scott, G. M., Gaddis, B. H. &amp; Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. <i>The Leadership Quarterly</i>, 13, 705-750.</p> <p>Pawar, B. S. &amp; Eastman, K. K. (1997). The Nature and Implications of Contextual Influences on Transformational Leadership: A Conceptual Examination. <i>The Academy of Management Review</i>, 22(1), 80-109.</p> <p>Shamir, B. &amp; Howell, J. M. (1999). Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(2), 257-283.</p> <p>Tosi, H. L. (1991). The Organization as a Context for Leadership Theory: A Multi-level Approach. <i>The Leadership Quarterly</i>, 2(3), 205-228.</p>
<p><b>Structure</b></p> <p>Empirical articles</p>	<p>Brown, M. E. &amp; Gioia, D. A. (2002). Making things click Distributive leadership in an online division of an offline organization. <i>The Leadership Quarterly</i>, 13, 397-419.</p> <p>Denis, J.-L., Lamothe, L. &amp; Langley, A. (2001). The Dynamics of Collective Leadership and Strategic Change in Pluralistic Organizations. <i>The Academy of Management Journal</i>, 44(4), 809-837.</p> <p>Gargiulo, M. (1993). Two-Step Leverage: Managing Constraint in Organizational Politics. <i>Administrative Science Quarterly</i>, 38(1), 1-19.</p> <p>Green, S. G., Anderson, S. E. &amp; Shivers, S. L. (1996). Demographic and Organizational Influences on Leader–Member Exchange and Related Work Attitudes. <i>Organizational Behavior and Human Decision Processes</i>, 66(2), 203-214.</p> <p>Howell, J. M. &amp; Hall-Merenda, K. E. (1999). The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance. <i>Journal of Applied Psychology</i>, 84(5), 680-694.</p> <p>Howell, J. M., Neufeld, D. J. &amp; Avolio, B. J. (2005). Examining the relationship of leadership and physical distance with business unit performance. <i>The Leadership Quarterly</i>, 16(2), 273-285.</p> <p>Karakowsky, L. &amp; Siegel, J. P. (1999). The Effects of Proportional Representation and Gender Orientation of the Task on Emergent Leadership Behaviour in Mixed-Gender Work Groups. <i>Journal of Applied Psychology</i>, 84(4), 620-631.</p> <p>Marta, S., Leritz, L. E. &amp; Mumford, M. D. (2005). Leadership skills and the group performance: Situational demands, behavioral requirements, and planning. <i>The Leadership Quarterly</i>, 16, 97-120.</p> <p>Mumford, M. D., Marks, M. A., Connelly, M. S., Zaccaro, S. J. &amp; Reiter-Palmon, R. (2000). Development of Leadership Skills: Experience and Timing. <i>The Leadership Quarterly</i>, 11(1), 87-114.</p> <p>Smith, P. B., Wang, Z. M. &amp; Leung, K. (1997). Leadership, Decision-Making and Cultural Context: Event Management within Chinese Joint Ventures. <i>The Leadership Quarterly</i>, 8(4), 413-431.</p>

<p><b>Time</b> Conceptual articles</p>	<p>Avolio, B. J. &amp; Bass, B. M. (1995). Individual Consideration Viewed at Multiple Levels of Analysis: A Multi-Level Framework for Examining the Diffusion of Transformational Leadership. <i>The Leadership Quarterly</i>, 6(2), 199-218. .</p> <p>Denis, J.-L., Langlely, A. &amp; Cazale, L. (1996). Leadership and Strategic Change under Ambiguity. <i>Organization Studies</i>, 17(4), 673-699.</p> <p>Hackman, J. R. &amp; Wageman, R. (2005). A Theory of Team Coaching. <i>The Academy of Management Review</i>, 30(2), 269-287 .</p> <p>Hunt, J. G. &amp; Ropo, A. (1995). Multi-Level Leadership: grounded Theory and Mainstream Theory applied to the Case of General Motors. <i>The Leadership Quarterly</i>, 6(3), 379-412.</p> <p>Pawar, B. S. &amp; Eastman, K. K. (1997). The Nature and Implications of Contextual Influences on Transformational Leadership: A Conceptual Examination. <i>The Academy of Management Review</i>, 22(1), 80-109.</p> <p>Shamir, B. &amp; Howell, J. M. (1999). Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership. <i>Leadership Quarterly</i>, 10(2), 257-283.</p>
<p><b>Time</b> Empirical articles</p>	<p>Denis, J.-L., Lamothe, L. &amp; Langlely, A. (2001). The Dynamics of Collective Leadership and Strategic Change in Pluralistic Organizations. <i>The Academy of Management Journal</i>, 44(4), 809-837.</p> <p>Hunt, J. G., Boal, K. B. &amp; Dodge, G. E. (1999). The Effects of Visionary and Crisis-Responsive Charisma on Followers: An Experimental Examination of Two Kinds of Charismatic Leadership. <i>The Leadership Quarterly</i>, 10(3), 423-448.</p>

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## Appendix B. Behavioural implications from values

Based on the Nardon and Steers (2009) work on divergence and convergence in models of national culture.

**Table B1. Behavioural implications of the Hierarchy-Equality dimension**

<b>Hierarchical</b>	<b>Egalitarian</b>
Belief that power should be distributed hierarchically	Belief that power should be distributed relatively equally
Belief in ascribed or inherited power with ultimate authority residing in institutions	Belief in shared or elected power with ultimate authority residing in the people
Emphasis on organizing vertically	Emphasis on organizing horizontally
Preference for autocratic or centralized decision-making	Preference for participatory or decentralized decision-making
Emphasis on who is in charge	Emphasis on who is best qualified
Acceptance of authority; reluctance to question authority	Rejection or scepticism of authority; willingness to question authority

Source: Nardon and Steers (2009)

**Table B2. Behavioural implications of the Individualism-Collectivism dimension**

<b>Individualistic</b>	<b>Collectivistic</b>
Person-centred approach valued; primary loyalty to oneself	Group-centred approach valued; primary loyalty to the group
Preference for preserving individual rights over social harmony	Preference for preserving social harmony over individual rights
Belief that people achieve self-identity through individual accomplishment	Belief that people achieve self-identity through group membership
Focus on accomplishing individual goals	Focus on accomplishing group goals
Sanctions reinforce independence and personal responsibility	Sanctions reinforce conformity to group norms
Contract-based agreements	Relationship-based agreements
Tendency toward low-context (direct, frank) communication	Tendency toward high-context (subtle, indirect) communication
Tendency toward individual decision-making	Tendency toward group or participative decision-making

Source: Nardon and Steers (2009)

**Table B3. Behavioural implications of the Mastery-Harmony dimension**

<b>Mastery</b>	<b>Harmony</b>
Focus on changing or controlling one's natural and social environment	Focus on living in harmony with nature and adjusting to the natural and social environment
Achievement valued over relationships	Relationships valued over achievement
Emphasis on competition in the pursuit of personal or group goals	Emphasis on social progress, quality of life, and the welfare of others
Embraces change and unquestioned innovation	Defends traditions; scepticism towards change
Emphasis on material possessions as symbols of achievement	Emphasis on economy, harmony, and modesty
Emphasis on assertive, proactive, "masculine" approach	Emphasis on passive, reactive, "feminine" approach
Preference for performance-based extrinsic rewards	Preference for seniority-based intrinsic rewards

Source: Nardon and Steers (2009)

**Table B4. Behavioural implications of the Monochronism-Polychronism dimension**

<b>Monochronic</b>	<b>Polychronic</b>
Sequential attention to individual tasks	Simultaneous attention to multiple tasks
Linear, single-minded approach to work, planning, and implementation	Nonlinear, interactive approach to work, planning, and implementation
Precise concept of time; punctual	Relative concept of time; often late
Approach is job-centred; commitment to the job and often to the organization	Approach is people-centred; commitment to people and human relationships
Separation of work and personal life	Integration of work and personal life
Approach to work is focused and impatient	Approach to work is unfocused and patient

Source: Nardon and Steers (2009)

**Table B5. Behavioural implications of the Universalism-Particularism dimension**

<b>Universalistic</b>	<b>Particularistic</b>
Individual behaviour largely regulated by rules, laws, formal policies, standard operating procedures, and social norms that are widely supported by societal members and applied uniformly to everyone	While rules are important, they often require modifications in their application or enforcement by influential people (e.g., parents, peers, superiors, government officials) or unique circumstances
Rule-based	Relationship-based
Emphasis on legal contracts and meticulous record-keeping	Emphasis on interpersonal relationships and trust; less accepted
Rules and procedures spelt out clearly and published widely	Rules and procedures often ambiguous or not believed or accepted
Rules are internalized and followed without question	Rules are sometimes ignored or followed only when strictly enforced
Do things formally by the book	Do things through informal networks
Low tolerance for rule-breaking	Tolerance for rule-breaking
Decisions based largely on objective criteria (e.g., rules, policies)	Decisions often based on subjective criteria (e.g., hunches, personal connections)

Source: Nardon and Steers (2009)

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## Appendix C. Intro video, Delphi round 1. Video transcript and link to YouTube video.

The 9 min video was included in the introduction page of the survey in round 1. This appendix is a transcript supplemented with screen shots. The video can be watched here: <https://youtu.be/rcF3ADEpBhI>



Welcome to this introduction video to the first survey in my Delphi study on Leadership Context. Thank you for taking the time and the effort to participate! This video introduces some overall terms. Terms from the existing knowledge about leadership context that will be used throughout the survey. Another reason for this video is that I am asking both practitioners and academics and we don't always use the same terms about what's going on. So, this video serves the purpose of establishing a joint frame of reference.



The purpose of the study is to build a framework for leadership context, and I have identified thirty factors from empirical research which are confirmed to influence either leadership and/or employee work performance. So that has been the inclusion criteria for having the factors in the study. These factors group themselves into five categories which is also the structure of the survey. So don't be scared when you start going through the number of pages, because I have chosen to have one factor on each page to make it easier to navigate forth and back if you wish to do so. And it will be rather fast to go through each page.



The five categories are:

- A category of **determinant factors**, which are factors largely outside the leader's control exercising an influence into the leader's area. That could be external complexity or risk intensity.
- There is a category of **Systemic factors** like the level of formalization in the organisation or resource constraints influencing into the leader's area.
- There is a category of **Climate factors**, which concerns the shared perceptions of the members of the organisation about 'how we do things around here'. That could be the climate for safety or the climate for ethical conduct.
- There is a category of **Intrinsic factors** like the composition of personalities among the team members and the diversity between them.
- Finally, there is a category of **intentionality factors** which concern the organisation's intention which influence the behaviour that the leader chooses. For example, when the organisation is pursuing optimisation which makes the leader choose to follow up closely to gain efficiency in his or her organisation.



Now, a few words about some of the terms used. When the survey talks about leadership, we talk about any intentional behaviour a leader or an employee temporarily assuming leadership exercises to influence others, directly or indirectly, with the purpose of realising the organisation's intentions, aims and objectives.



When talking about employee work performance behaviour; it is included because it is considered the desired outcome of leadership. That is to promote one of three types of work performance behaviour:

- **Task performance**, which is about the quantity and the quality of the work that the employee delivers on their designated tasks.
- We talk about **Adaptive performance**, which is about the learning and the change efforts put in by the employees.
- We talk about **Contextual performance**, also called organisational citizenship behaviour, which is about the self-initiated supporting and helping behaviour directed to colleagues and taking responsibility for realising the organisational objectives.

When looking for factors to put into the initial framework for leadership context, the criteria has been that I could find empirical research indicating that this particular contextual factor could exercise an influence on either leadership itself or on the desired outcomes of leadership - that is: employee work performance behaviour.



Related to this; and influencing how a leader chooses to lead – At a more overall level we also address three organisational intentions guiding leadership:

- That is **Exploitation**, which is the organisational intention to drive optimal operation and gain efficiency – which relates rather naturally to task performance.

- It is **Exploration**, which the organisational intention to innovate and to create new business avenues – which seems to relate rather naturally to adaptive performance.
- It is The Quality of the **Human Capital**, which is the organisational intention to develop the necessary competences, engagement and relations in the organisation to perform – which seems to relate rather naturally to contextual performance.



So, in the survey I will be asking for your judgement about the capacity of the different contextual factors to influence either leadership or employee work performance behaviour. – and if the sum of your experience tells you that this particular contextual factor can influence either – then you can agree,

– if on the other hand the sum of your experience tells you that this contextual factor cannot influence either leadership or employee work performance – then you can disagree. Both answers, disagree or agree, are equally valuable and important for the study.

So, when answering please do so based on the accumulated sum of your insights, experience and knowledge about how the contextual factors can influence either leadership and/or employee work performance.

The reason for this way of asking is that if a factor can influence either one of these two it is relevant to include it in a framework for leadership context – and that is the purpose of the study; to try to craft such a framework.



The empirical literature indicates that there are certain effects that the factors can exercise. For example, in some instances the context **helps** leadership, for example when a high level of formalisation with clear procedures help guide employee behaviour. In other instances, there are indications that the context **hinders** leadership or effective work performance, for example when a very dynamic external environment keeps changing the conditions.

Besides the helping and hindering effects, there are findings suggesting that a certain context can **guide** leadership – that is; make the leader choose a different behaviour than if the context was different. An example could be that if a leader has a lot of employees over the distance the leader might choose to engage in more frequent 121s than if he/she had all the employees in the same office.

Also, there are findings contending that some contextual factors can be **shaped** by leadership to support the business intentions. An example could be to promote a stronger climate for productive discussions by training the team members on how to engage in challenging each other's ideas – in order to drive more innovation.





Together, these effects are the hypotheses the survey will try to find your level of agreement or disagreement to. In addition, and importantly... Your further input, both on contextual factors and on their effects is most welcome and an important part of the study.

When considering how different contextual factors can influence leadership or work performance behaviour it is important to recognise that the different factors can keep each other in check, in balance or in an equilibrium.

As such the leadership context is a force field or a balanced tension system, and the fact that a contextual factor holds the power to influence either leadership or work performance behaviour does not mean that it always does - so, when asked about the influence of the different contextual factors please consider that it is the capacity of the contextual factor to exercise an influence - not a hard fast rule that it always does.



I look forward to learning from your answers, thank you for watching, you are now ready to start the survey.

./.

## Appendix D. Pilot Questionnaire.

The survey was done applying Mesydel.com. See screen dumps below. The content of this appendix is an excerpt of the pilot survey to exemplify the design and the adjustments reported in section 10.2.

Round 1

### Leadership Context Survey, Pilot

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Welcome to this survey concerning Leadership Context and its effects on leadership and employee work performance. Thank you for your willingness to participate! The study is part of my Doctoral qualification at Henley Business School at the University of Reading, United Kingdom.

**Please watch this information video (7 min), introducing how to fill in the survey.**  
*To return to this window from the video, please use the "Back" button in your browser.*

**What?**

The survey investigates your agreement with the existence of 30 factors identified in the leadership literature. Also, your agreement with their effects on leadership and employee work performance. To aid you in answering, short videos (2-3 min) introduces each section of questions. I kindly ask you to watch these videos before you start answering the questions in each section.

**How?**

I recommend that you note down any other factors or thoughts that come to mind while you work your way through the survey. At the end of the survey, I kindly ask you to put in these suggestions for relevant contextual factors not covered in the survey and any other considerations that can further develop the framework.

There are five sections in the survey; one for each category of contextual factors, and one final section for your overall reflections and input on additional factors.

Your answers are stored every time you turn a page, and the survey does not have to be answered in one go even though I recommend doing so. Once submitted on the final page, your answers cannot be changed but will remain visible to you until the survey deadline.

Please click "Participate" below to begin.

Participate

Round 1 — Page 1/30

### Leadership Context Survey, Pilot

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## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence leadership and/or employee work performance.

**Please watch this video explanation (2 min) before beginning the section.**  
*To return to this window from the video, please use the "Back" button in your browser.*

### Physical distance and temporal separation

**Definition:** This factor concerns the level of physical distance and level of difference in normal work hour presence across the workforce.

**Physical distance and temporal separation** ⓘ ✎ ☰

To which extent do you agree that physical distance and temporal separation can guide leadership efforts?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Do not know

## **Introduction**

Welcome to this survey concerning Leadership Context and its effects on leadership and employee work performance. Thank you for your willingness to participate!

[Please watch this information video \(7 min\), introducing how to fill in the survey.](#)

*To return to this window from the video, please use the "Back" button in your browser.*

## **What?**

The survey investigates your agreement with the existence of 30 factors identified in the leadership literature. Also, your agreement with their effects on leadership and employee work performance. To aid you in answering, short videos (2-3 min) introduce each section of questions. I kindly ask you to watch these videos before you start answering the questions in each section.

The research is part of my DBA academic qualification at Henley Business School, UK. The research collects expert judgements about how contextual factors can influence either leadership or employee work performance. You have been invited because you are considered an expert as defined in this study due to your experience and background. The purpose is to develop a framework for leadership context, and a summary of the findings will be shared with you.

Responses are anonymous and individual respondents will not be identified by name or organisation in the report. The data will be kept securely for inclusion in publications directly related to this research. The project has been subject to ethical review by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct. You can withdraw from the study at any time. By completing the questionnaire it will be understood that you are aged 18 or over and that you give consent for your responses to be used for the purposes of this research project.

## **How?**

I recommend that you note down any other factors or thoughts that come to mind while you work your way through the survey. At the end of the survey, I kindly ask you to put in these suggestions for relevant contextual factors not covered in the survey and any other considerations that can further develop the framework.

There are five sections in the survey; one for each category of contextual factors, and one final section for your overall reflections and input on additional factors.

Your answers are stored every time you turn a page, and the survey does not have to be answered in one go even though I recommend doing so. Once submitted on the final page, your answers cannot be changed but will remain visible to you until the survey deadline.

Please click "Participate" below to begin.

Page 1.1

## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence leadership and/or employee work performance.

[Please watch this video explanation \(2 min\) before beginning the section.](#)

*To return to this window from the video, please use the "Back" button in your browser.*

## Physical distance and temporal separation

**Definition:** This factor concerns the level of physical distance and level of difference in normal work hour presence across the workforce.

**Question 1.1.1** Simple choice question (one answer allowed)

### Physical distance and temporal separation

To which extent do you agree that physical distance and temporal separation can guide leadership efforts?

- Strongly agree (Same scale throughout, not repeated in the appendix).
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Do not know

**Question 1.1.2** Simple choice question (one answer allowed)

### Physical distance and temporal separation

To which extent do you agree that physical distance and temporal separation can help or hinder leadership and/or employee work performance behaviour?

**Question 1.1.3** Simple choice question (one answer allowed)

### Physical distance and temporal separation

To which extent do you agree that leadership can mitigate hindering effects from physical distance and temporal separation?

**Question 1.1.4** Open question (text)

### Physical distance and temporal separation

Please enter any comments regarding physical distance and temporal separation.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

Page 1.2

## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence leadership and/or employee work performance.

### Risk intensity

**Definition:** This factor concerns the presence of threat or error potential; its magnitude of consequences; and, its probability of occurrence ranging from high-risk to low-risk context.

**Question 1.2.1** Simple choice question (one answer allowed)

#### Risk intensity

To which extent do you agree that risk intensity can guide leadership efforts?

**Question 1.2.2** Simple choice question (one answer allowed)

#### Risk intensity

To which extent do you agree that risk intensity can help or hinder leadership and/or employee work performance behaviour?

**Question 1.2.3** Simple choice question (one answer allowed)

#### Risk intensity

To which extent do you agree that leadership can mitigate hindering effects from risk intensity?

**Question 1.2.4** Open question (text)

#### Risk intensity

Please enter any comments regarding risk intensity.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

Page 1.5

## Systemic factors

This section covers the characteristics of the organisational system influencing leadership and/or employee work performance.

[Please watch this video explanation \(2 min\) before answering the questions in this section.](#)

## Hierarchical level

**Definition:** This factor concerns whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.

### Question 1.5.1 Simple choice question (one answer allowed)

#### Hierarchical level

To which extent do you agree that the leader's hierarchical level can guide leadership efforts?

### Question 1.5.2 Open question (text)

#### Hierarchical level

Please enter any comments regarding the hierarchical level of the leader.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

## Page 1.6

# Systemic factors

This section covers the characteristics of the organisational system influencing leadership and/or employee work performance.

## Centralization and empowerment

**Definition:** This factor concerns the extent to which the leader has decision authority within the areas of responsibility; and the extent to which this authority can be delegated.

### Question 1.6.1 Simple choice question (one answer allowed)

#### Centralization and empowerment

To which extent do you agree that the level of centralization and empowerment can guide leadership efforts?

### Question 1.6.2 Simple choice question (one answer allowed)

#### Centralization and empowerment

To which extent do you agree that centralization and empowerment can help or hinder leadership and/or employee work performance behaviour?

### Question 1.6.3 Simple choice question (one answer allowed)

#### Centralization and empowerment

To which extent do you agree that leadership can influence centralization and empowerment within the boundaries of the larger system's centralization?

**Question 1.6.4 Open question (text)**

**Centralization and empowerment**

Please enter any comments regarding centralization and empowerment.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

**Page 1.7**

## **Systemic factors**

This section covers the characteristics of the organisational system influencing leadership and/or employee work performance.

### **Formalization**

**Definition: This factor concerns the level of formally documented directives regulating practices within the organisation which must be followed.**

**Question 1.7.1 Simple choice question (one answer allowed)**

**Formalization**

To which extent do you agree that the level of formalization can guide leadership efforts?

**Question 1.7.2 Simple choice question (one answer allowed)**

**Formalization**

To which extent do you agree that formalization can help or hinder leadership and/or employee work performance behaviour?

**Question 1.7.3 Simple choice question (one answer allowed)**

**Formalization**

To which extent do you agree that leadership can influence formalization within the boundaries of the larger system's formalization?

**Question 1.7.4 Open question (text)**

**Formalization**

Please enter any comments regarding formalization.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

**Page 1.8**

## **Systemic factors**

This section covers the characteristics of the organisational system influencing leadership and/or employee work performance.

## **Specialization and complexity**

**Definition:** This factor concerns the number of different specialised functions within the leader's area of responsibility; and within each function, the level of the newness of the task; the change rate of the task requirements; and, the number of unique acts and information pieces required.

**Question 1.8.1** Simple choice question (one answer allowed)

### **Specialization and complexity**

To which extent do you agree that the level of specialization and complexity can guide leadership efforts?

**Question 1.8.2** Simple choice question (one answer allowed)

### **Specialization and complexity**

To which extent do you agree that specialization and complexity can help or hinder leadership and/or employee work performance behaviour?

**Question 1.8.3** Simple choice question (one answer allowed)

### **Complexity**

To which extent do you agree that leadership can mitigate hindering effects from complexity?

**Question 1.8.4** Simple choice question (one answer allowed)

### **Complexity**

To which extent do you agree that leadership can influence the emergence or reproduction of complexity?

**Question 1.8.5** Open question (text)

### **Specialization and complexity**

Please enter any comments regarding specialization and complexity.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]



Page 1.11

## Social factors

This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here" - it comprises:

- the clarity of behavioural expectations (e.g. codes of conduct or policies);
- enactment of practices and behaviours (walking the talk);
- alignment between the leaders about how to behave; and,
- alignment between the written policies and rules and the way they are lived,

influencing leadership and/or employee work performance.

Together these shared perceptions are called the organisation's climate. A climate can be strong or weak, and can be focused on different elements related to leadership.

[Please watch this explanation video \(3 min\) before answering the questions in this section.](#)

*To return to this window from the video, please use the "Back" button in your browser.*

[Break – sections left out of the appendix]

Page 1.15

## Social factors

This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here."

### The climate for goal-path (goal-action) clarity and stretch

**Definition:** This factor concerns the strength of the climate when it comes to ensuring clear goals, understanding how actions are linked to delivering the goals; honing our professional mastery; and, stretching ambitions to always perform better.

**Question 1.15.1** Simple choice question (one answer allowed)

#### Climate for goal-path (goal-action) clarity and stretch

To which extent do you agree that the climate for goal-path (goal-action) clarity and stretch can help or hinder leadership and/or employee work performance behaviour?

**Question 1.15.2** Simple choice question (one answer allowed)

#### Climate for goal-path (goal-action) clarity and stretch

To which extent do you agree that leadership can influence the emergence or reproduction of the climate for goal-path (goal-action) clarity and stretch?

**Question 1.15.3 Open question (text)**

**Climate for goal-path (goal-action) clarity and stretch**

Please enter any comments regarding the climate for goal-path (goal-action) clarity and stretch.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

**Page 1.17**

## **Social factors**

This section covers the shared perceptions among the organisation’s members when it comes to “how we do things around here.”

### **The climate for trust, tolerance and collaboration**

**Definition:** This factor concerns the strength of the climate when it comes to acting from a common ground; trusting each other; tolerating differences; building good relations; and, helping and backing each other up.

**Question 1.17.1 Simple choice question (one answer allowed)**

**Climate for trust, tolerance and collaboration**

To which extent do you agree that the climate for trust, tolerance and collaboration can help or hinder leadership and/or employee work performance behaviour?

**Question 1.17.2 Simple choice question (one answer allowed)**

**Climate for trust, tolerance and collaboration**

To which extent do you agree that leadership can influence the emergence or reproduction of the climate for trust, tolerance and collaboration?

**Question 1.17.3 Open question (text)**

**Climate for trust, tolerance and collaboration**

Please enter any comments regarding the climate for trust, tolerance and collaboration.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

Page 1.20

## Social factors

This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here."

### The climate for following and sharing leadership

**Definition:** This factor concerns the strength of the climate when it comes to participating constructively as a follower when being led; taking empowered action; and, assuming and exercising leadership towards peers.

**Question 1.20.1** Simple choice question (one answer allowed)

#### Climate for following and sharing leadership

To which extent do you agree that the climate for following and sharing leadership can help or hinder leadership and/or employee work performance behaviour?

**Question 1.20.2** Simple choice question (one answer allowed)

#### Climate for following and sharing leadership

To which extent do you agree that leadership can influence the emergence or reproduction of the climate for following and sharing leadership?

**Question 1.20.3** Open question (text)

#### Climate for following and sharing leadership

Please enter any comments regarding the climate for following and sharing leadership.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

Page 1.24

## Intrinsic factors

This section covers factors which are related to the individual members of the team or organisation the leader leads. The presence of the different factors and the level of alignment or diversity in the team exercise an influence on leadership and work performance.

[Please watch this explanation video \(2 min\) before answering the questions.](#)

*To return to this window from the video, please use the "Back" button in your browser.*

### Values & values-diversity

**Definition:** This factor concerns the inner values among the team members, which guide our behaviour; that is if I and we believe in authoritative or participative decision-making; if individual rights or group focus comes first; whether we should drive change in the world or seek harmony; if we should be precise and sequential or flexible in our planning; and, if rules or relations are most important. These value settings are partly rooted in the national culture of the team member.

**Question 1.24.1** Simple choice question (one answer allowed)

**Values and values-diversity**

To which extent do you agree that the values and values-diversity in the team can guide leadership efforts with their implicit or explicit expectations?

**Question 1.24.2** Simple choice question (one answer allowed)

**Values and values-diversity**

To which extent do you agree that the values and the values-diversity in the team can help or hinder leadership and/or employee work performance behaviour?

**Question 1.24.3** Simple choice question (one answer allowed)

**Values and values-diversity**

To which extent do you agree that leadership can mitigate hindering effects of values and values-diversity by regulating behaviour, changing composition of the workforce, or developing expertise?

**Question 1.24.4** Open question (text)

**Values and values-diversity**

Please enter any comments regarding values and values-diversity.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

Page 1.27

## **Intentionality factors**

This section covers the organisational intentions influencing leadership and/or employee work performance.

[Please watch this last explanation video \(3 min\) before answering the questions.](#)

*To return to this window from the video, please use the "Back" button in your browser.*

### **Exploitation and task performance**

**Definition:** This factor concerns how much effort, time and energy the leader should invest in promoting exploitation (getting the most out of the resources) and facilitate the emergence of task performance (optimal operation).

**Question 1.27.1 Simple choice question (one answer allowed)**

**Exploitation and task performance**

To which extent do you agree that an organisational intention to pursue exploitation and task performance can guide leadership efforts?

**Question 1.27.2 Simple choice question (one answer allowed)**

**Exploitation and task performance**

To which extent do you agree that leadership can shape elements in the context addressed earlier in the survey to promote an organisational intention to pursue exploitation and task performance?

**Question 1.27.3 Open question (text)**

**Exploitation and task performance**

Please enter any comments regarding the organisational intention to pursue exploitation and task performance.

*As this is the pilot survey; please comment if you experienced missing clarity or any difficulties in the questions and definition above.*

[Break – sections left out of the appendix]

**Page 1.30**

## **Finalising comments**

In this final section, I kindly ask you for overall comments for the further development of the framework for leadership context.

**Question 1.30.1 Open question (text)**

**Finalising comments**

Please enter any comments regarding the further development of the framework for leadership context.

*As this is the pilot survey; please comment on any issues which hindered your ability to complete the survey. Also, please share any suggestions for optimisation of the survey.*

Please click "Finish" to learn about the next steps and finalise the survey.

**End**

Thank you - your input is highly valued! Once the deadline for the first round is reached, I will get an overview of when the second round will be ready and sent to you. The timeline depends on the amount and character of the input from this round, and I will update you on the timeline as soon as possible.

*As this is the pilot; thank you for your input for the optimisation of the survey. Looking forward to hear more in our upcoming follow-up.*

Goodbye for now, thanks, Torben Noerby

## **Appendix D. Round 1 Questionnaire.**

The round 1 survey was identical for the three panels. It was set up for each panel to allow the transfer of results from round one to two for each panel. This appendix contains the full questionnaire.

### **Introduction**

**Welcome to this survey concerning Leadership Context and its effects on leadership and employee work performance.**

**Thank you for your willingness to participate!**

**[Please watch this information video \(9 min\), introducing the study, some terminology and how to fill in the survey.](#)**

The video will open in a separate window.

### **What?**

The survey investigates your agreement with the existence of 29 contextual factors influencing leadership and employee work performance identified in the leadership literature.

### **How?**

Please note down any other factors or thoughts that come to mind while you work your way through the survey. At the end of the survey, I kindly ask you to put in these suggestions for relevant contextual factors not covered in the survey and any other considerations that can further develop the framework.

First, there is an introduction section, followed by five sections in the survey; one for each category of contextual factors, and one final section for your overall reflections and input on additional factors.

Your answers are saved every time you turn a page, and the survey does not have to be answered in one go even though I recommend doing so. Once submitted on the final page, your answers cannot be changed but will remain visible to you until the survey deadline.

Please click "Participate" below to begin.

Page 1.1

## Consent to participate

The research is part of my DBA academic qualification at Henley Business School, UK. The research collects expert judgements about how contextual factors can influence either leadership or employee work performance. You have been invited because you are considered an expert as defined in this study due to your experience and background. The purpose is to develop a framework for leadership context, and a summary of the findings will be shared with you.

Responses are anonymous and individual respondents will not be identified by name or organisation in the report. The data will be kept securely for inclusion in publications directly related to this research. The project has been subject to ethical review by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct. You can withdraw from the study at any time. By completing the questionnaire it will be understood that you are aged 18 or over and that you give consent for your responses to be used for the purposes of this research project.

I can always be contacted on tn@pphr.com or +45 2339 7595 should questions arise. Thank you, Torben Noerby

### The purpose of the survey and your focus when answering the survey

The study investigates how context impacts on leadership and employee work performance.

However, that a contextual factor can have an effect does not mean that the contextual factor always exercises this influence because other factors might keep it in check.

The study asks about the influence on either leadership or employee work performance behaviour because an influence on either or both makes it relevant to include the factor in a framework for leadership context.

Therefore it is important that you answer with your best judgement about how the contextual factors typically impact on leadership and employee work performance; and not from a narrow perspective of what is going on right now in your current position or organisation.

#### Question 1.1.1 Simple choice question (one answer allowed)

##### Your focus when answering

Kindly confirm that you will answer this survey from the sum of your accumulated experience, insight and knowledge.

- I confirm

Thank you, please proceed by clicking the next page number below. You can always move to previous pages by clicking the page numbers.

Page 1.2

## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which seem to have the potential to influence either leadership or employee work performance, or both.

The purpose of the study is to uncover which factors are relevant to include in a framework for leadership context. If a factor has a tendency to influence either leadership or work performance behaviour it should be included - even though it does not always exercise its influence.

### Physical distance

**Definition:** How close or how far are the members of the team or organisation physically located from each other and from the leader.

**Question 1.2.1** Simple choice question (one answer allowed)

**Physical distance**

Physical distance can influence the choice of leadership behaviour.

- Strongly agree (Same scale throughout, not repeated in the appendix).
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Do not know

**Question 1.2.2** Simple choice question (one answer allowed)

**Physical distance**

Physical distance can help or hinder either leadership or employee work performance.

**Question 1.2.3** Open question (text)

**Physical distance**

Please enter any comments regarding physical distance in the leadership context.

Page 1.3

## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence either leadership or employee work performance, or both.



## **Risk intensity**

**Definition: The presence of threat or error potential; how bad the consequences would be; and, how likely it is to happen, ranging from high-risk to low-risk context.**

**Question 1.3.1 Simple choice question (one answer allowed)**

**Risk intensity**

Risk intensity can influence the choice of leadership behaviour.

**Question 1.3.2 Simple choice question (one answer allowed)**

**Risk intensity**

Risk intensity can help or hinder either leadership or employee work performance.

**Question 1.3.3 Open question (text)**

**Risk intensity**

Please enter any comments regarding risk intensity in the leadership context.

Page 1.4

## **Determinant factors**

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence either leadership or employee work performance, or both.

### **External complexity**

**Definition: The complexity outside the leader's area of responsibility influencing the decision-making in the leader's area. The more elements influencing decision-making and the greater the differences between them; the more complex the external environment is.**

**Question 1.4.1 Simple choice question (one answer allowed)**

**External complexity**

External complexity can influence the choice of leadership behaviour.

**Question 1.4.2 Simple choice question (one answer allowed)**

**External complexity**

External complexity can help or hinder either leadership or employee work performance.

**Question 1.4.3 Open question (text)**

**External complexity**

Please enter any comments regarding external complexity in the leadership context.

Page 1.5

## Determinant factors

This section covers contextual factors which are largely outside the leader's control, but which have the potential to influence either leadership or employee work performance, or both.

### External dynamism

**Definition:** How much, how often, how fast, and how predictably the elements which influence decision-making from outside the leader's area of responsibility change.

**Question 1.5.1** Simple choice question (one answer allowed)

**External dynamism**

External dynamism can influence the choice of leadership behaviour.

**Question 1.5.2** Simple choice question (one answer allowed)

**External dynamism**

External dynamism can help or hinder either leadership or employee work performance.

**Question 1.5.3** Open question (text)

**External dynamism**

Please enter any comments regarding external dynamism in the leadership context.

Page 1.6

## Systemic factors

**This section covers the characteristics of the organisational system which some studies suggest influence either leadership or employee work performance, or both.**

### Hierarchical level

**Definition:** Whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.

**Question 1.6.1** Simple choice question (one answer allowed)

**Hierarchical level**

Hierarchical level can influence the choice of leadership behaviour.

**Question 1.6.2** Simple choice question (one answer allowed)

**Hierarchical level**

Hierarchical level can help or hinder either leadership or employee work performance.

**Question 1.6.3 Open question (text)**

**Hierarchical level**

Please enter any comments regarding hierarchical level in the leadership context.

**Page 1.7**

## **Systemic factors**

This section covers the characteristics of the organisational system influencing either leadership or employee work performance, or both.

### **Centralization**

**Definition: The degree to which decision authority and mandate are kept centralized or delegated into the organisation.**

**Question 1.7.1 Simple choice question (one answer allowed)**

**Centralization**

Centralization can influence the choice of leadership behaviour.

**Question 1.7.2 Simple choice question (one answer allowed)**

**Centralization**

Centralization can help or hinder either leadership or employee work performance.

**Question 1.7.3 Simple choice question (one answer allowed)**

**Centralization**

A leader can increase or decrease centralization in their leadership context within the limitations given by the organisational and external context.

**Question 1.7.4 Open question (text)**

**Centralization**

Please enter any comments regarding centralization in the leadership context.

**Page 1.8**

## **Systemic factors**

This section covers the characteristics of the organisational system influencing either leadership or employee work performance, or both.

## Formalization

**Definition:** The level of centrally or locally decided documented policies, procedures, rules, and guidelines which must be followed.

### Question 1.8.1 Simple choice question (one answer allowed)

#### Formalization

Formalization can influence the choice of leadership behaviour.

### Question 1.8.2 Simple choice question (one answer allowed)

#### Formalization

Formalization can help or hinder either leadership or employee work performance.

### Question 1.8.3 Simple choice question (one answer allowed)

#### Formalization

A leader can increase or decrease formalization in their leadership context within the limitations given by the organisational and external context.

### Question 1.8.4 Open question (text)

#### Formalization

Please enter any comments regarding formalization in the leadership context.

## Page 1.9

# Systemic factors

This section covers the characteristics of the organisational system influencing either leadership or employee work performance, or both.

## Internal complexity

**Definition:** The number of different job roles and specialised functions within the leader's area. In addition, within each function; the task complexity; that is the number of unique acts and information pieces required for the task. Also, how new the tasks are and how often the task requirements change.

### Question 1.9.1 Simple choice question (one answer allowed)

#### Internal complexity

Internal complexity can influence the choice of leadership behaviour.

### Question 1.9.2 Simple choice question (one answer allowed)

#### Internal complexity

Internal complexity can help or hinder either leadership or employee work performance.

**Question 1.9.3 Simple choice question (one answer allowed)**

**Internal complexity**

A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context.

**Question 1.9.4 Open question (text)**

**Internal complexity**

Please enter any comments regarding internal complexity in the leadership context.

**Page 1.10**

## **Systemic factors**

This section covers the characteristics of the organisational system influencing either leadership or employee work performance, or both.

### **Interdependence**

**Definition: The number and character of dependencies extending across jobs, functions or organisational boundaries related to tasks, goals, information, resources, approval or learning.**

**Question 1.10.1 Simple choice question (one answer allowed)**

**Interdependence**

Interdependence can influence the choice of leadership behaviour.

**Question 1.10.2 Simple choice question (one answer allowed)**

**Interdependence**

Interdependence can help or hinder either leadership or employee work performance.

**Question 1.10.3 Simple choice question (one answer allowed)**

**Interdependence**

A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context.

**Question 1.10.4 Open question (text)**

**Interdependence**

Please enter any comments regarding interdependence in the leadership context.

Page 1.11

## Systemic factors

This section covers the characteristics of the organisational system influencing either leadership or employee work performance, or both.

### Resource constraints

**Definition:** The availability of the resources that are necessary to operate. Including available resources and resources which can be freed up through optimisation or prioritisation.

**Question 1.11.1** Simple choice question (one answer allowed)

**Resource constraints**

Resource constraints can influence the choice of leadership behaviour.

**Question 1.11.2** Simple choice question (one answer allowed)

**Resource constraints**

Resource constraints can help or hinder either leadership or employee work performance.

**Question 1.11.3** Simple choice question (one answer allowed)

**Resource constraints**

A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context.

**Question 1.11.4** Open question (text)

**Resource constraints**

Please enter any comments regarding resource constraints in the leadership context.

Page 1.12

## Climate factors

This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here" - it comprises:

- the clarity of behavioural expectations (e.g. codes of conduct or policies);
- enactment of practices and behaviours (walking the talk);
- alignment between the leaders about how to behave; and,
- alignment between the written policies and rules and the way they are lived,

...suggested to influence leadership or employee work performance, or both. The stronger each of the four bullet points are; the stronger the climate is.

Together these shared perceptions are called the organisation's climate. A climate can be strong or weak, and can be focused on different elements related to leadership. This section was repeated for each factor in the climate category; however, in black. The section is not repeated in this appendix but marked with [Into-text as on page 1.12].

### Climate for exploitative learning (continuous improvement)

**Definition:** The strength of the climate when it comes to learning to refine, develop, improve and extend existing operation continuously.

**Question 1.12.1** Simple choice question (one answer allowed)

**Climate for exploitative learning (continuous improvement)**

The climate for exploitative learning (continuous improvement) can help or hinder either leadership or work performance, or both.

**Question 1.12.2** Simple choice question (one answer allowed)

**Climate for exploitative learning (continuous improvement)**

The climate for exploitative learning (continuous improvement) can be strengthened through leadership interventions.

**Question 1.12.3** Open question (text)

**Climate for exploitative learning (continuous improvement)**

Please enter any comments regarding the climate for exploitative learning (continuous improvement) in the leadership context.

Page 1.13

## Climate factors

[Into-text as on page 1.12]

### Climate for explorative learning (innovation)

**Definition:** The strength of the climate when it comes to learning to create future business practices through innovation and experimentation; by applying new competencies, technologies and ways of working.

**Question 1.13.1 Simple choice question (one answer allowed)**

**Climate for explorative learning (innovation)**

The climate for explorative learning (innovation) can help or hinder either leadership or work performance, or both.

**Question 1.13.2 Simple choice question (one answer allowed)**

**Climate for explorative learning (innovation)**

The climate for explorative learning (innovation) can be strengthened through leadership interventions.

**Question 1.13.3 Open question (text)**

**Climate for explorative learning (innovation)**

Please enter any comments regarding the climate for explorative learning (innovation) in the leadership context.

**Page 1.14**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for change**

**Definition: The strength of the climate when it comes to shifting between exploration and exploitation; adapting to externally imposed change; or, participating in internally driven change.**

**Question 1.14.1 Simple choice question (one answer allowed)**

**Climate for change**

The climate for change can help or hinder either leadership or work performance, or both.

**Question 1.14.2 Simple choice question (one answer allowed)**

**Climate for change**

The climate for change can be strengthened through leadership interventions.

**Question 1.14.3 Open question (text)**

**Climate for change**

Please enter any comments regarding the climate for change in the leadership context.

**Page 1.15**

## **Climate factors**

[Into-text as on page 1.12]



## **Climate for diligence and discipline**

**Definition: The strength of the climate when it comes to meeting expectations; delivering on commitments; holding each other accountable; and, diligently complying with standards.**

### **Question 1.15.1 Simple choice question (one answer allowed)**

#### **Climate for diligence and discipline**

The climate for diligence and discipline can help or hinder either leadership or work performance, or both.

### **Question 1.15.2 Simple choice question (one answer allowed)**

#### **Climate for diligence and discipline**

The climate for diligence and discipline can be strengthened through leadership interventions.

### **Question 1.15.3 Open question (text)**

#### **Climate for diligence and discipline**

Please enter any comments regarding the climate for diligence and discipline in the leadership context.

Page 1.16

## **Climate factors**

[Into-text as on page 1.12]

## **Climate for goal-path clarity and stretch**

**Definition: The strength of the climate when it comes to goals, paths, and goal-path linkages; continuously improving our professional mastery; and, stretching ambitions always to perform better.**

### **Question 1.16.1 Simple choice question (one answer allowed)**

#### **Climate for goal-path clarity and stretch**

The climate for goal-path clarity and stretch can help or hinder either leadership or work performance, or both.

### **Question 1.16.2 Simple choice question (one answer allowed)**

#### **Climate for goal-path clarity and stretch**

The climate for goal-path clarity and stretch can be strengthened through leadership interventions.

**Question 1.16.3 Open question (text)**

**Climate for goal-path clarity and stretch**

Please enter any comments regarding the climate for goal-path clarity and stretch in the leadership context.

**Page 1.17**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for service**

**Definition: The strength of the climate when it comes to serving our customers to create positive customer experiences; and to restore negative customer experiences.**

**Question 1.17.1 Simple choice question (one answer allowed)**

**Climate for service**

The climate for service can help or hinder either leadership or work performance, or both.

**Question 1.17.2 Simple choice question (one answer allowed)**

**Climate for service**

The climate for service can be strengthened through leadership interventions.

**Question 1.17.3 Open question (text)**

**Climate for service**

Please enter any comments regarding the climate for service in the leadership context.

**Page 1.18**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for collaboration**

**Definition: The strength of the climate when it comes to collaborating well, acting from a common ground; trusting each other; feeling safe in the group; being open to other views; accepting each other; building good relations; and, helping and backing each other up.**

**Question 1.18.1 Simple choice question (one answer allowed)**

**Climate for collaboration**

The climate for collaboration can help or hinder either leadership or work performance, or both.

**Question 1.18.2 Simple choice question (one answer allowed)**

**Climate for collaboration**

The climate for collaboration can be strengthened through leadership interventions.

**Question 1.18.3 Open question (text)**

**Climate for collaboration**

Please enter any comments regarding the climate for collaboration in the leadership context.

**Page 1.19**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for productive discussion**

**Definition:** The strength of the climate when it comes to engaging in productive discussions and constructive conflict to promote divergent thinking in problem-solving; qualify decision-making; or, to align and create common ground.

**Question 1.19.1 Simple choice question (one answer allowed)**

**Climate for productive discussion**

The climate for productive discussion can help or hinder either leadership or work performance, or both.

**Question 1.19.2 Simple choice question (one answer allowed)**

**Climate for productive discussion**

The climate for productive discussion can be strengthened through leadership interventions.

**Question 1.19.3 Open question (text)**

**Climate for productive discussion**

Please enter any comments regarding the climate for productive discussion in the leadership context.

**Page 1.20**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for fairness and justice**

**Definition:** The strength of the climate when it comes to the fairness of rules, regulations, policies and procedures and their application; the fairness of the judgements and decisions made by leaders; and, the fairness in the distribution of resources, rewards and sanctions.

**Question 1.20.1 Simple choice question (one answer allowed)**

**Climate for fairness and justice**

The climate for fairness and justice can help or hinder either leadership or work performance, or both.

**Question 1.20.2 Simple choice question (one answer allowed)**

**Climate for fairness and justice**

The climate for fairness and justice can be strengthened through leadership interventions.

**Question 1.20.3 Open question (text)**

**Climate for fairness and justice**

Please enter any comments regarding the climate for fairness and justice in the leadership context.

**Page 1.21**

## **Climate factors**

[Into-text as on page 1.12]

### **Climate for following**

**Definition: The strength of the climate when it comes to participating constructively as a follower when being led; taking empowered action; and, acting out given responsibilities in full also when it includes influencing and guiding peers.**

**Question 1.21.1 Simple choice question (one answer allowed)**

**Climate for following**

The climate for following can help or hinder either leadership or work performance, or both.

**Question 1.21.2 Simple choice question (one answer allowed)**

**Climate for following**

The climate for following can be strengthened through leadership interventions.

**Question 1.21.3 Open question (text)**

**Climate for following**

Please enter any comments regarding the climate for following in the leadership context.

**Page 1.22**

## **Climate factors**

[Into-text as on page 1.12]

## **Climate for safety**

**Definition:** The strength of the climate when it comes to safety; the assessment of threats; the risk avoidance; the risk acceptance; the preventive protection; and, the reactive safety responses.

### **Question 1.22.1 Simple choice question (one answer allowed)**

#### **Climate for safety**

The climate for safety can help or hinder either leadership or work performance, or both.

### **Question 1.22.2 Simple choice question (one answer allowed)**

#### **Climate for safety**

The climate for safety can be strengthened through leadership interventions.

### **Question 1.22.3 Open question (text)**

#### **Climate for safety**

Please enter any comments regarding the climate for safety in the leadership context.

## **Page 1.23**

# **Climate factors**

[Into-text as on page 1.12]

## **Climate for ethical conduct**

**Definition:** The strength of the climate when it comes to loyally enacting the company's ethical code; behaving ethically; promoting ethical conduct to peers; and making ethical decisions.

### **Question 1.23.1 Simple choice question (one answer allowed)**

#### **Climate for ethical conduct**

The climate for ethical conduct can help or hinder either leadership or work performance, or both.

### **Question 1.23.2 Simple choice question (one answer allowed)**

#### **Climate for ethical conduct**

The climate for ethical conduct can be strengthened through leadership interventions.

### **Question 1.23.3 Open question (text)**

#### **Climate for ethical conduct**

Please enter any comments regarding the climate for ethical conduct in the leadership context.

Page 1.24

## Climate factors

[Into-text as on page 1.12]

### Climate for sustainability

**Definition:** The strength of the climate when it comes to loyally enacting the company's sustainability code; acting sustainably; promoting sustainability to internal and external stakeholders; and making sustainable decisions.

#### Question 1.24.1 Simple choice question (one answer allowed)

##### Climate for sustainability

The climate for sustainability can help or hinder either leadership or work performance, or both.

#### Question 1.24.2 Simple choice question (one answer allowed)

##### Climate for sustainability

The climate for sustainability can be strengthened through leadership interventions.

#### Question 1.24.3 Open question (text)

##### Climate for sustainability

Please enter any comments regarding the climate for sustainability in the leadership context.

Page 1.25

## Intrinsic factors

**This section covers factors which are related to the individual members of the team or organisation the leader leads. It is suggested that the presence of the different factors and the level of alignment or diversity in the team can exercise an influence on leadership and work performance.**

### Value composition and diversity

**Definition:** The presence, level and distribution of values which guide our behaviour among the people in the leadership context. That is the composition and diversity of beliefs if authoritative or participative decision-making is best; if individual rights or group focus comes first; if we should drive change in the world or seek harmony; if we should be precise and sequential or flexible in our planning; and, if rules or relations are most important.

#### Question 1.25.1 Simple choice question (one answer allowed)

##### Value composition and diversity

The value composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Question 1.25.2 Simple choice question (one answer allowed)**

**Value composition and diversity**

The value composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Question 1.25.3 Simple choice question (one answer allowed)**

**Value composition and diversity**

A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Question 1.25.4 Open question (text)**

**Value composition and diversity**

Please enter any comments regarding the value composition and diversity in the leadership context.

**Page 1.26**

## **Intrinsic factors**

This section covers factors which are related to the individual members of the team or organisation the leader leads. The presence of the different factors and the level of alignment or diversity in the team exercise an influence on leadership and work performance.

### **Personality composition and diversity**

**Definition: The presence, level and distribution of traits which guide our behaviour among the people in the leadership context. That is the composition and diversity of emotional stability; extraversion; openness; agreeableness; and, conscientiousness.**

**Question 1.26.1 Simple choice question (one answer allowed)**

**Personality composition and diversity**

The personality composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Question 1.26.2 Simple choice question (one answer allowed)**

**Personality composition and diversity**

The personality composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Question 1.26.3 Simple choice question (one answer allowed)**

**Personality composition and diversity**

A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Question 1.26.4 Open question (text)**

**Personality composition and diversity**

Please enter any comments regarding the personality composition and diversity in the leadership context.

**Page 1.27**

## **Intrinsic factors**

This section covers factors which are related to the individual members of the team or organisation the leader leads. The presence of the different factors and the level of alignment or diversity in the team exercise an influence on leadership and work performance.

### **Expertise composition and diversity**

**Definition: The presence, level and distribution of expertise which influence behaviour among the people in the leadership context. That is the composition and diversity of task-, adaptive-, and contextual expertise.**

**Question 1.27.1 Simple choice question (one answer allowed)**

**Expertise composition and diversity**

The expertise composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Question 1.27.2 Simple choice question (one answer allowed)**

**Expertise composition and diversity**

The expertise composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Question 1.27.3 Simple choice question (one answer allowed)**

**Expertise composition and diversity**

A leader can change the expertise composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Question 1.27.4 Open question (text)**

**Expertise composition and diversity**

Please enter any comments regarding the expertise composition and diversity in the leadership context.



Page 1.28

## Intentionality factors

This section covers the organisational intentions, which are suggested to exercise an influence on leadership or employee work performance, or both.

Often the leader will be pursuing more than one organisational intention to deliver on the objectives from the organisation.

### The intention to pursue exploitation and task performance

**Definition:** The intention to optimise and increase organisational efficiency to sustain and improve business performance. Focus on promoting task performance to maintain, refine, develop and extend the existing operation building on known competences, business models, technologies, and ways of operating.

#### Question 1.28.1 Simple choice question (one answer allowed)

**The intention to pursue exploitation (efficiency and continuous improvement) and task performance**

The intention to pursue exploitation and task performance can influence the choice of leadership behaviour.

#### Question 1.28.2 Simple choice question (one answer allowed)

**The intention to pursue exploitation (efficiency and continuous improvement) and task performance**

A leader can promote exploitation and task performance by influencing the relevant contextual factors that are possible to change within their leadership context.

#### Question 1.28.3 Open question (text)

**The intention to pursue exploitation (efficiency and continuous improvement) and task performance**

Please enter any comments regarding the intention to pursue exploitation and task performance in the leadership context.

Page 1.29

## Intentionality factors

This section covers the organisational intentions influencing leadership and/or employee work performance.

### The intention to pursue exploration and adaptive performance

**Definition:** The intention to build the foundation for future business outside the current business or to disrupt, rethink and significantly change existing operation. Focus on promoting adaptive performance to explore future business platforms through innovation and experimentation; to build new business models; and, to leverage new competences, technologies, and ways of working.

**Question 1.29.1 Simple choice question (one answer allowed)**

**The intention to pursue exploration (innovation) and adaptive performance**

The intention to pursue exploration and adaptive performance can influence the choice of leadership behaviour.

**Question 1.29.2 Simple choice question (one answer allowed)**

**The intention to pursue exploration (innovation) and adaptive performance**

A leader can promote exploration and adaptive performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Question 1.29.3 Open question (text)**

**The intention to pursue exploration (innovation) and adaptive performance**

Please enter any comments regarding the intention to pursue exploration and adaptive performance in the leadership context.

**Page 1.30**

## **Intentionality factors**

This section covers the organisational intentions influencing leadership and/or employee work performance.

### **The intention to pursue human capital quality and contextual performance**

**Definition: The intention to develop the quality of the Human Capital and build high-quality relations conducive to the current or future organisational functioning. Focus on promoting contextual performance to enable either exploitation or exploration, or both.**

**Question 1.30.1 Simple choice question (one answer allowed)**

**The intention to pursue human capital quality and contextual performance**

The intention to pursue human capital quality and contextual performance can influence the choice of leadership behaviour.

**Question 1.30.2 Simple choice question (one answer allowed)**

**The intention to pursue human capital quality and contextual performance**

A leader can promote human capital quality and contextual performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Question 1.30.3 Open question (text)**

**The intention to pursue human capital quality and contextual performance**

Please enter any comments regarding the intention to pursue human capital quality and contextual performance in the leadership context.

Page 1.31

## Input and reflections

In this final section, I kindly ask you to share any input and reflections regarding the leadership context.

That could be input on further factors, which you find relevant to include in a framework for leadership context.

It can be considerations related to the effects of contextual factors or any other reflections related to the leadership context.

### Question 1.31.1 Open question (text)

#### Input and reflections

Please enter any input and reflections regarding leadership context you find can promote the development of a framework for leadership context.

**End**

**Thank you - your input is highly valued!**

Once the deadline for the first round is reached, I will get an overview of when the second round will be ready and sent to you.

The timeline depends on the amount and character of the input from this round, and I will update you on the timeline as soon as possible.

Goodbye for now, thanks

Torben Noerby

tn@pphr.com

## **Appendix D. Round 2 Questionnaire.**

The round 2 survey was tailored for each panel reflecting the contested hypotheses from round one and factors included for other reasons. The survey in this appendix pertains to the Academic Panel and displays excerpts to illustrate the design. The questionnaire provided contingent texts referring to the panellist's answers and the consolidated answers from the other experts in the same panel in round 1. Hence, in this appendix the contingent answers for each included factor are displayed, while only the relevant text was presented to the Panellist responding.

### **Introduction**

**Welcome to the second survey of the study concerning Leadership Context and its effects on leadership and employee work performance.**

### **Thank you!**

The responses from the first round provided rich and valuable input, which have now been analysed. It took a bit longer than anticipated to analyse the results of round 1 because of the richness of your comments – **thank you very much!** Due to a high level of agreement on a range of factors and the rich comments from the round, I have decided to run only two surveys rather than the originally planned three rounds.

**Hence, this is the final survey before I can return with a summary of the results.**

### **Round two**

This second survey includes the factors where the results in round one display significant differences in the distribution of answers among the experts in your panel. For each of these factors, I have summarised the comments from round one. For each question, I kindly ask that you read this brief summary and comment on how that relates to your insight. Hopefully, it will also provide you with a bit of learning from the other respondents as to how the factor impacts leadership and work performance.

Your agreement rating from round one is also reported for each factor. You are invited to re-assess your agreement to the hypothesis if the summary of comments and your reflections make such re-assessment relevant. This round contains 10 questions; in comparison, the first round had 66 questions. At the same time, a bit more time for reading the summary of comments before answering each question is required.

**Nevertheless, all together, this second survey should require less time than round 1 – thank you for taking the time and effort!**

### **Timeline and next steps**

After this round I will analyse the input in conjunction with the input from round 1. In continuation, you will receive a summary of the learnings about leadership context coming out of this study.

**Please answer the survey before Monday, December the 7th.**

Please click "Participate" below to begin.

Page 2.1

## Consent to participate

The research is part of my DBA academic qualification at Henley Business School, UK. The research collects expert judgements about how contextual factors can influence either leadership or employee work performance. You have been invited because you are considered an expert as defined in this study due to your experience and background. The purpose is to develop a framework for leadership context, and a summary of the findings will be shared with you.

Responses are anonymous and individual respondents will not be identified by name or organisation in the report. The data will be kept securely for inclusion in publications directly related to this research. The project has been subject to ethical review by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct. You can withdraw from the study at any time. By completing the questionnaire it will be understood that you are aged 18 or over and that you give consent for your responses to be used for the purposes of this research project.

I can always be contacted on [tn@pphr.com](mailto:tn@pphr.com) or +45 2339 7595 should questions arise.

Please proceed by clicking the next page number below. You can always move to previous pages by clicking the page numbers.

Page 2.2

## External complexity

**Definition: The complexity outside the leader's area of responsibility influencing the decision-making in the leader's area. The more elements influencing decision-making and the greater the differences between them; the more complex the external environment is.**

### Introduction

**The distribution of answers in round one indicates differences of opinion about whether external complexity can help or hinder either leadership or work performance, or both.**

To investigate this further, please review this summary of the qualitative feedback from round one. Hereafter you are kindly asked to comment and invited to reassess your answer from round one if so desired.

### Summary of comments from round one

A summary of the comments from round one provides the following input. Firstly, that simple markets with low external complexity make decision-making and management processes easier for the leader. In contrast, that a more complex external environment, e.g. a high level of regulation or intense competition makes decision making more difficult and slower. Moreover, that higher complexity can trigger uncertainty, anxiety, confusion, and unpredictability impeding performance and making effective leadership more difficult.

One panellist remarked that external complexity does not affect leadership behaviour or employee performance. Some panellists state that time pressure acts as an intensifier increasing the difficulties from external complexity on decision making. Moreover, two panellists report that the causal effects of external complexity are intensified through the interaction with dynamism and risk intensity in the external environment referring to the term VUCA (Volatile; Uncertainty; Complex; Ambiguous).

#### **Question 2.2.1 Open question (text)**

##### **External complexity**

In round one, you answered **Strongly disagree** to the statement that *"External complexity can help or hinder either leadership or employee work performance"*

In contrast, 84% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

#### **Question 2.2.2 Open question (text)**

##### **External complexity**

In round one, you answered **Disagree** to the statement that *"External complexity can help or hinder either leadership or employee work performance"*

In contrast, 84% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

#### **Question 2.2.3 Open question (text)**

##### **External complexity**

In round one, you answered **Neither agree nor disagree** to the statement that *"External complexity can help or hinder either leadership or employee work performance"*

In contrast, 84% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

#### **Question 2.2.4 Open question (text)**

##### **External complexity**

In round one, you answered **Agree** to the statement that "*External complexity can help or hinder either leadership or employee work performance*"

In line with you, 84% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

#### **Question 2.2.5 Open question (text)**

##### **External complexity**

In round one, you answered **Strongly agree** to the statement that "*External complexity can help or hinder either leadership or employee work performance*"

In line with you, 84% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

#### **Question 2.2.6 Simple choice question (one answer allowed)**

##### **External complexity**

External complexity can help or hinder either leadership or employee work performance.

- Strongly agree (**Same scale throughout, not repeated in the appendix**).
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Do not know

[Break – sections left out of the appendix]

#### **Page 2.4**

## **Hierarchical level**

**Definition: Whether the leader's position is placed at the top, middle or frontline of the organisational hierarchy.**

## Introduction

**The distribution of answers in round one indicates differences of opinion about whether the leader's placement in the hierarchy can influence the choice of leadership behaviour.**

To investigate this further, please review this summary of the qualitative feedback from round one. Hereafter you are kindly asked to comment and invited to reassess your answer from round one if so desired.

## Summary of comments from round one

The comments from round one are summarised here: There are some leadership practices which are important no matter the level, e.g. being authentic, holding people accountable, while other leadership practices vary in importance with the hierarchical level, e.g. leading leaders rather than individual contributors, day-to-day versus long-term focus. This is, as noted by one panellist, in line with the leadership pipeline concept.

Related hereto some note that leadership flows from the influence a person, appointed leader or not, exercises in an organisation, not from the position alone. However, the position level for an appointed leader influences leadership expectations, which guides the leader's behaviour and influences how the organisation acts in response to requests. The importance of acting in accordance with certain leader expectations related to different hierarchical levels is intensified in some national and company cultures, e.g. the differences in power distance between countries or the level of 'formality' in the corporate culture.

### Question 2.4.1 Open question (text)

#### Hierarchical level

In round one, you answered **Strongly disagree** to the statement that "*Hierarchical level can influence the choice of leadership behaviour*"

In contrast, 83% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

### Question 2.4.2 Open question (text)

#### Hierarchical level

In round one, you answered **Neither agree nor disagree** to the statement that "*Hierarchical level can influence the choice of leadership behaviour*"

In contrast, 83% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.



**Question 2.4.3 Open question (text)**

**Hierarchical level**

In round one, you answered **Agree** to the statement that "*Hierarchical level can influence the choice of leadership behaviour*"

In line with you, 83% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.4.4 Open question (text)**

**Hierarchical level**

In round one, you answered **Strongly agree** to the statement that "*Hierarchical level can influence the choice of leadership behaviour*"

In line with you, 83% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.4.5 Open question (text)**

**Hierarchical level**

In round one, **you did not answer** the statement that "*Hierarchical level can influence the choice of leadership behaviour*"

In comparison, 83% of the experts in your panel answered Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.4.6 Simple choice question (one answer allowed)**

**Hierarchical level**

Hierarchical level can influence the choice of leadership behaviour.

[Break – sections left out of the appendix]

## Climate factors

This section covers the shared perceptions among the organisation's members when it comes to "how we do things around here" - it comprises:

- the clarity of behavioural expectations (e.g. codes of conduct or policies);
- enactment of practices and behaviours (walking the talk);
- alignment between the leaders about how to behave; and,
- alignment between the written policies and rules and the way they are lived,

influencing leadership or employee work performance, or both. The stronger each of the four bullet points are; the stronger the climate is.

**Together these shared perceptions are called the organisation's climate. A climate can be strong or weak, and can be focused on different elements related to leadership.**

### Climate for sustainability

**Definition: The strength of the climate when it comes to loyally enacting the company's sustainability code; acting sustainably; promoting sustainability to internal and external stakeholders; and making sustainable decisions.**

#### Introduction

**The distribution of answers in round one indicates differences of opinion about whether the climate for sustainability can help or hinder either leadership or employee work performance, or both.**

To investigate this further, please review this summary of the qualitative feedback from round one. Hereafter you are kindly asked to comment and invited to reassess your answer from round one if so desired.

#### Summary of comments from round one

The summary of the round one comments follows here: The climate for sustainability concerns embedding criteria for decisions and actions which bring about good environmental and social impacts; promote the company image; meet customer expectations and industry standards; and contribute to a better world.

Whilst it is important, it has less of an immediate and direct helping or hindering impact on leadership and work performance. However, focus on sustainability, environmental impact and corporate social responsibility is becoming increasingly important for many companies due to requisite demands from customers and society.

In this sense, it can help motivation; sense-making; building pride in doing good; attracting, recruiting and retaining talent for the people where the sustainability agenda aligns well with their personal values. On the other hand, a strong climate for sustainability can exercise a hindering effect on leadership and work performance by introducing competing priorities which must be balanced, e.g. to which level should the social or environmental impact weigh in compared to meeting financial performance criteria. Another hindering effect is if employees experience that the sustainability agenda is only external PR rather than also lived internally, as this 'lip service' approach raises doubt about the trustworthiness of the leadership.

**Question 2.9.1 Open question (text)**

**Climate for sustainability**

In round one, you answered **Disagree** to the statement that *"The climate for sustainability can help or hinder either leadership or work performance, or both"*

In contrast, 74% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.9.2 Open question (text)**

**Climate for sustainability**

In round one, you answered **Neither agree nor disagree** to the statement that *"The climate for sustainability can help or hinder either leadership or work performance, or both"*

In contrast, 74% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.9.3 Open question (text)**

**Climate for sustainability**

In round one, you answered **Agree** to the statement that *"The climate for sustainability can help or hinder either leadership or work performance, or both"*

In line with you, 74% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.9.4 Open question (text)**

**Climate for sustainability**

In round one, you answered **Strongly agree** to the statement that *"The climate for sustainability can help or hinder either leadership or work performance, or both"*

In line with you, 74% of the experts in your panel answered, Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.9.5 Open question (text)**

**Climate for sustainability**

In round one, **you did not answer** the statement that *"The climate for sustainability can help or hinder either leadership or work performance, or both"*

In comparison, 74% of the experts in your panel answered Agree or Strongly agree.

Below you are kindly asked to comment on your answer from round one.

Also, if desired, please reassess your answer.

If revisiting your answer gives no reason to change your round one answer, you are welcome to jump to the next page without reassessing.

**Question 2.9.6 Simple choice question (one answer allowed)**

**Climate for sustainability**

The climate for sustainability can help or hinder either leadership or work performance, or both.

[Break – sections left out of the appendix]

Page 2.12

## Input and reflections

In this final section, I kindly ask you to share any input regarding the leadership context; anything you suggest I pay attention to in the analysis; or any other reflections.

### Question 2.12.1 Simple choice question (one answer allowed)

Kindly confirm that any questions left unanswered were reviewed and deliberately left unanswered.

- I confirm

### Question 2.12.2 Open question (text)

#### Input and reflections

Please enter any input and reflections regarding leadership context you find can promote the development of a framework for leadership context.

**End**

**Thank you - your input is highly valued!**

The next step is that I will analyse the input from round 2 in conjunction with the input from round 1.

In continuation, you will receive a summary of the learnings about leadership context coming out of this study.

Goodbye for now, thanks

Torben Noerby

tn@pphr.com

## Appendix G. NVIVO Codebook – Analysis of comments

The codebook was initially developed from the theoretical framework pertaining to the confirmation of each factor's definition and the hypotheses. In addition, the codebook was enriched with emerging codes. The column "References" below reflects the number of occurrences initially coded in the analysis of the panellist comments from rounds 1 and 2.

**Table G1. NVIVO Codebook**

<b>Code name</b>	<b>References</b>
1.00 Determinant overall	0
Requisite variety	60
Sense-making capacity	68
1.02 Physical Distance	19
1.02 Choice	37
1.02 Help	7
1.02 Hinder	19
1.03 Risk Intensity	26
1.03 Choice	36
1.03 Help	7
1.03 Hinder	5
State of crisis	8
Time pressure	13
1.04 External Complexity	20
1.04 Choice	23
1.04 Help	2
1.04 Hinder	15
VUCA	9
1.05 External Dynamism	35
1.05 Choice	18
1.05 Help	5
1.05 Hinder	4
Time pressure	3

1.050 Systemic overall	2
1.06 Hierarchical level	23
1.06 Choice	24
1.06 Help	15
1.06 Hinder	11
Matrix	3
1.07 Centralization	29
1.07 Choice	14
1.07 Help	17
1.07 Hinder	17
1.07 In- or Decrease	16
1.08 Formalization	17
1.08 Choice	11
1.08 Help	25
1.08 Hinder	16
1.08 In- or Decrease	12
1.09 Internal Complexity	26
1.09 Choice	26
1.09 Help	6
1.09 Hinder	12
1.09 In- or Decrease	17
1.10 Interdependence	18
1.10 Choice	21
1.10 Help	12
1.10 Hinder	11
1.10 In- or Decrease	18
1.11 Resource Constraints	15
1.11 Choice	32
1.11 Help	15
1.11 Hinder	14
1.11 In- or Decrease	19

1.110 Climate overall	6
Climate strength	52
Agreement-based	17
Alignment-based	20
Enactment-based	27
Expectation-based	19
Company legacy and values	17
Force field	15
Immediate Manager	4
Leaders shape climate	59
Org life stage & maturity	20
Trust as a climate component	17
1.12 Climate for Exploitative Learning	6
1.12 Help	18
1.12 Hinder	7
1.12 Strengthen	26
1.13 Climate for Explorative Learning	7
1.13 Help	8
1.13 Hinder	9
1.13 Strengthen	25
1.14 Climate for Change	25
1.14 Help	10
1.14 Hinder	8
1.14 Strengthen	19
1.15 Climate for Diligence and Discipline	7
1.15 Help	16
1.15 Hinder	11
1.15 Strengthen	16
1.16 Climate for Goal-Path clarity and Stretch	33
1.16 Help	14
1.16 Hinder	6
1.16 Strengthen	20




1.17 Climate for Service	12
1.17 Help	11
1.17 Hinder	6
1.17 Strengthen	17
1.18 Climate for Collaboration	36
1.18 Help	14
1.18 Hinder	10
1.18 Strengthen	19
1.19 Climate for Productive Discussions	22
1.19 help	10
1.19 Hinder	8
1.19 Strengthen	22
1.20 Climate for Fairness and Justice	15
1.20 Help	8
1.20 Hinder	10
1.20 Strengthen	17
1.21 Climate for Empowerment	47
1.21 Help	10
1.21 Hinder	9
1.21 Strengthen	22
1.22 Climate for Safety	29
1.22 Help	8
1.22 Hinder	6
1.22 Strengthen	15
1.23 Climate for Ethical Conduct	7
1.23 Help	5
1.23 Hinder	13
1.23 Strengthen	13
1.24 Climate for Sustainability	11
1.24 Help	7
1.24 Hinder	4
1.24 Strengthen	10

1.240 Intrinsic overall	2
Engagement	6
Hire-Fire	42
1.25 Value Diversity and Composition	29
1.25 Change comp	9
1.25 Choice	22
1.25 Help	12
1.25 Hinder	11
1.26 Personality Diversity and Composition	21
1.26 Change comp	17
1.26 Choice	19
1.26 Help	13
1.26 Hinder	11
1.27 Expertise Diversity and Composition	19
1.27 Change comp	9
1.27 Choice	13
1.27 Help	12
1.27 Hinder	7
1.270 Intentionality overall	24
Intention to change	10
1.28 Intention to Exploit	16
1.28 Choice	15
1.28 Shape context to promote	6
1.29 Intention to Explore	17
1.29 Choice	19
1.29 Shape context to promote	10
1.30 Intention to develop Human Capital Quality	11
1.30 Choice	18
1.30 Shape context to promote	17
1.31_Input	5
Leadership range & flexibility	4
The leader herself	71

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## Appendix H. LinkedIn invitation. Video transcript and link to YouTube video.

An individualised invitation to participate including a video was distributed via LinkedIn.

 **Torben Nørby** • 7:49 AM  
Hi Dave

I hope all is well during these challenging Covid-19 times...


As you perhaps know, I am doing a doctoral programme at Henley in the UK, where I research the leadership context, which is the reason I am reaching out.

I invite you to participate in the research. Learn more in this 4 min video which introduces the study: <https://youtu.be/QOmZp6ogj-I>

Kindly have a look and send me a message whether you have the opportunity to participate or with any questions you might have.

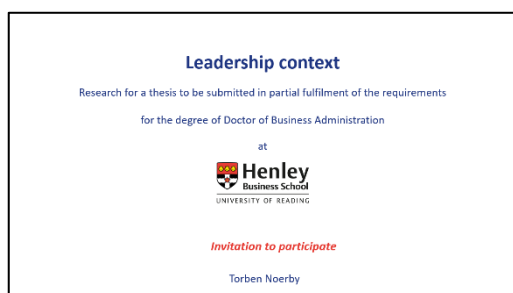
I look forward to hearing from you.

Best, Torben



**Research - Invitation**  
youtube.com

Below a transcript supplemented with screen shots. The 4-minute invitation video be watched here: <https://youtu.be/QOmZp6ogj-l>



Opening page on the invitation video. Displayed 3 seconds without any speak.



Welcome to this short video introducing my research to the ones invited to participate in the research. The research is part of the qualification for the Doctor of Business Administration which I am undertaking at Henley Business School in the UK. With more than 30 years of leader experience and more than 15 years of consulting experience I have been underway since October 2016, first with the completion of the Master in Business and Management Research, and now in the doctoral phase.

The purpose of the study is to build a framework for leadership context - I am investigating which factors comprise leadership context and how they can help or hinder leadership and employee work performance.

The study is a Modified Delphi study, that is; three rounds of online survey where I ask experts about their judgement of what factors comprise leadership context; and, if these factors influence leadership and employee work performance.



The way it will run is:

- first, a survey where I ask you to assess your agreement to what I have already found in the existing leadership research when it comes to leadership context.
- ....and, importantly, ask for your input to further refine and expand the framework.
- After this first round of surveys, I will gather the input and revise the framework.
- Then, the revised framework will be sent back to you in a second survey along with the average scores from the other experts in the panel.
- In this survey, I will ask you to revisit your assessments in regard to agreement on the effects of the different contextual factors, and I will ask you to assess the new input from round one.

After this, I will revise it again and I will repeat the process one last time in order to hopefully arrive at a framework where there is a high degree of agreement among the experts that this is what comprises leadership context and these are the effects on leadership and work performance.



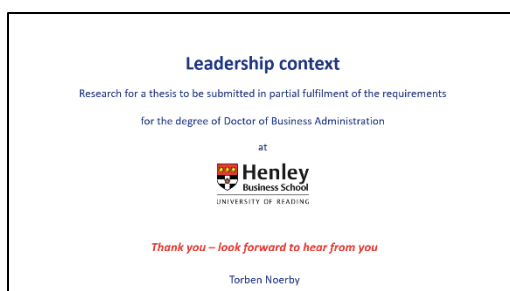
There are three panels because the study aims to develop a framework that can help leaders, leadership developers and leadership researchers understand leadership context even better.

- It will help researchers transfer findings from context to context,
- It will help leaders lead more efficiently, faster when they change context; and,

- It will allow leadership developers tailor their leadership development initiatives even better.

I have carefully selected and been very deliberate about who I invite to the different panels. That is to make sure that I compose the expert panels to maximise the perspectives and get the judgements which are the corner stone in a Modified Delphi study. Now, you are invited because you are an expert in at least one of these categories - and I would highly value your precious time in helping me with this research. What I kindly ask you to invest is three times one hour to answer the surveys over the duration of a maximum of 6 months – I do need some time between the surveys to refine the framework. In return, I promise you that you will build a deeper insight into leadership context and the effects and upon completion I will put together a report with insights that I will share with you. To participate - please answer the message I sent you with this introduction video. Make sure to include the email you grant me permission to use to send you the surveys.

I hope you can find the time and you have the interest to participate - please do not hesitate to include any questions or any need for clarification in your response. Thank you for watching and please do also let me know if you do not have the opportunity to participate, but if you are still interested in the results - I am happy to share. Thank you very much for watching. I look forward to hearing from you - Bye bye.



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## Appendix I. Expert Details

This appendix reports the Expert panel characteristics.

**Table I1. Gender**

Panellists, Gender	Leaders				HR				Academics				Total			
	1		2		1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	44	94%	42	98%	18	44%	17	46%	23	74%	21	72%	85	71%	80	73%
Female	3	6%	1	2%	23	56%	20	54%	8	26%	8	28%	34	29%	29	27%

Source: LinkedIn

**Table I2. Education**

Panellists, Education level	Leaders				HR				Academics				Total			
	1		2		1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Dr. or PhD	3	6%	3	7%	7	17%	6	16%	31	100%	29	100%	41	35%	38	35%
Master	38	81%	34	79%	22	54%	20	54%	0	-	0	-	60	50%	54	50%
Below	6	13%	6	14%	12	29%	11	30%	0	-	0	-	18	15%	17	16%

Source: LinkedIn

Table I3. Nationality

Panellists, Nationality	Leaders				HR				Academics				Total			
	1		2		1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Australia	2	4%	2	5%	1	2%	1	3%	0	-	0	-	3	3%	3	3%
Brazil	2	4%	1	2%	0	-	0	-	0	-	0	-	2	2%	1	1%
Canada	2	4%	2	5%	2	5%	2	5%	2	6%	2	7%	6	5%	6	6%
Denmark	19	40%	17	40%	15	37%	12	32%	0	-	0	-	34	29%	29	27%
Finland	1	2%	1	2%	2	5%	2	5%	0	-	0	-	3	3%	3	3%
France	1	2%	1	2%	1	2%	1	3%	0	-	0	-	2	2%	2	2%
Germany	3	6%	2	5%	1	2%	1	3%	1	3%	1	3%	5	4%	4	4%
India	0	-	0	-	1	2%	1	3%	1	3%	1	3%	2	2%	2	2%
Ireland	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
Italy	0	-	0	-	1	2%	1	3%	0	-	0	-	1	1%	1	1%
Mexico	1	2%	1	2%	0	-	0	-	1	3%	1	3%	2	2%	2	2%
Morocco	0	-	0	-	0	-	0	-	1	3%	1	3%	1	1%	1	1%
Netherlands	3	6%	3	7%	1	2%	1	3%	2	6%	1	3%	6	5%	5	5%
Norway	2	4%	2	5%	1	2%	1	3%	1	3%	1	3%	4	3%	4	4%
Poland	0	-	0	-	2	5%	2	5%	0	-	0	-	2	2%	2	2%
Romania	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
Slovenia	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
South Africa	2	4%	2	5%	1	2%	1	3%	0	-	0	-	3	3%	3	3%
Spain	1	2%	1	2%	1	2%	1	3%	0	-	0	-	2	2%	2	2%
Sweden	2	4%	2	5%	2	5%	2	5%	0	-	0	-	4	3%	4	4%
Switzerland	0	-	0	-	0	-	0	-	1	3%	0	-	1	1%	0	-
Turkey	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
United Arab Emirates	0	-	0	-	1	2%	1	3%	0	-	0	-	1	1%	1	1%
United Kingdom	0	-	0	-	3	7%	2	5%	5	16%	5	17%	8	7%	7	6%
United States of America	2	4%	2	5%	5	12%	5	14%	16	52%	16	55%	23	19%	23	21%

Source: LinkedIn. Only represented countries displayed. List adapted from: <https://unstats.un.org/unsd/methodology/m49/overview/>, accessed 18 May 2020



Table I4. Location

Panellists, Location	Leaders				HR				Academics				Total			
	1		2		1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Australia	2	4%	2	5%	1	2%	1	3%	1	3%	1	3%	4	3%	4	4%
Brazil	1	2%	0	-	0	-	0	-	0	-	0	-	1	1%	0	-
Canada	3	6%	3	7%	2	5%	2	5%	2	6%	2	7%	7	6%	7	6%
China	2	4%	2	5%	0	-	0	-	0	-	0	-	2	2%	2	2%
Denmark	15	32%	13	30%	13	32%	10	27%	0	-	0	-	28	24%	23	21%
Finland	1	2%	1	2%	2	5%	2	5%	0	-	0	-	3	3%	3	3%
France	0	-	0	-	2	5%	2	5%	0	-	0	-	2	2%	2	2%
Germany	5	11%	4	9%	1	2%	1	3%	0	-	0	-	6	5%	5	5%
India	0	-	0	-	1	2%	1	3%	0	-	0	-	1	1%	1	1%
Ireland	2	4%	2	5%	0	-	0	-	0	-	0	-	2	2%	2	2%
Malaysia	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
Mexico	1	2%	1	2%	0	-	0	-	1	3%	1	3%	2	2%	2	2%
Morocco	0	-	0	-	0	-	0	-	1	3%	1	3%	1	1%	1	1%
Netherlands	2	4%	2	5%	1	2%	1	3%	2	6%	1	3%	5	4%	4	4%
Norway	2	4%	2	5%	1	2%	1	3%	1	3%	1	3%	4	3%	4	4%
Poland	0	-	0	-	2	5%	2	5%	0	-	0	-	2	2%	2	2%
Portugal	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
Russian Federation	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
Singapore	1	2%	1	2%	0	-	0	-	1	3%	0	-	2	2%	1	1%
Slovenia	1	2%	1	2%	0	-	0	-	0	-	0	-	1	1%	1	1%
South Africa	2	4%	2	5%	1	2%	1	3%	0	-	0	-	3	3%	3	3%
Spain	0	-	0	-	1	2%	1	3%	0	-	0	-	1	1%	1	1%
Sweden	1	2%	1	2%	2	5%	2	5%	0	-	0	-	3	3%	3	3%
United Arab Emirates	0	-	0	-	1	2%	1	3%	1	3%	1	3%	2	2%	2	2%
United Kingdom	1	2%	1	2%	5	12%	4	11%	6	19%	6	21%	12	10%	11	10%
United States of America	2	4%	2	5%	5	12%	5	14%	15	48%	15	52%	22	18%	22	20%

Source: LinkedIn. Only represented countries displayed. List adapted from: <https://unstats.un.org/unsd/methodology/m49/overview/>, accessed 18 May 2020

**Table I5. Regional experience**

Panellists, Regional experience	Leaders				HR				Academics				Total			
	1		2		1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Australia and New Zealand	3	6%	3	7%	2	5%	2	5%	2	6%	2	7%	7	6%	7	6%
Eastern Asia	3	6%	3	7%	0	-	0	-	1	3%	1	3%	4	3%	4	4%
Eastern Europe	3	6%	3	7%	2	5%	2	5%	1	3%	1	3%	6	5%	6	6%
Latin America and the Caribbean	4	9%	3	7%	0	-	0	-	1	3%	1	3%	5	4%	4	4%
Northern Africa	0	-	0	-	0	-	0	-	1	3%	1	3%	1	1%	1	1%
Northern America	7	15%	6	14%	10	24%	10	27%	21	68%	20	69%	38	32%	36	33%
Northern Europe	28	60%	26	60%	26	63%	22	59%	9	29%	9	31%	63	53%	57	52%
Middle East	3	6%	3	7%	1	2%	1	3%	1	3%	1	3%	5	4%	5	5%
South-eastern Asia	5	11%	5	12%	2	5%	1	3%	1	3%	0	-	8	7%	6	6%
Southern Asia	3	6%	2	5%	1	2%	1	3%	2	6%	1	3%	6	5%	4	4%
Southern Europe	6	13%	6	14%	2	5%	2	5%	2	6%	1	3%	10	8%	9	8%
Sub-Saharan Africa	2	4%	2	5%	1	2%	1	3%	0	-	0	-	3	3%	3	3%
Western Europe	11	23%	10	23%	7	17%	7	19%	9	29%	7	24%	27	23%	24	22%

Source: LinkedIn. Job-related responsibilities in the region. % of panellist displaying the experience. Region definitions adopted from: <https://unstats.un.org/unsd/methodology/m49/overview/>, accessed 18 May 2020

**Table I6. Functional experience**

Panellists, Functional experience	Leaders				HR				HR & Leaders			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Administration, Business Support, Planning	7	15%	7	16%	2	5%	2	5%	9	10%	9	11%
Bus. Dev., Strategy, Transformation, Optimization	18	38%	17	40%	5	12%	5	14%	23	26%	22	28%
Customer support & service, After sales service	2	4%	2	5%	3	7%	3	8%	5	6%	5	6%
Advisor, Consulting, Head-hunter, Writer/Author	6	13%	6	14%	17	41%	15	41%	23	26%	21	26%
Finance, Accounting, Investment	6	13%	5	12%	0	-	0	-	6	7%	5	6%
General Management, Managing Director	22	47%	21	49%	8	20%	8	22%	30	34%	29	36%
HR, Legal, PR, Comm., Relations, Corp. Affairs, HSE	5	11%	5	12%	41	100%	37	100%	46	52%	42	53%
IT	4	9%	3	7%	1	2%	1	3%	5	6%	4	5%
Officer in uniformed services	7	15%	7	16%	4	10%	3	8%	11	13%	10	13%
Operations, Supply chain, Logistics, MRO	17	36%	16	37%	1	2%	1	3%	18	20%	17	21%
Procurement, Contracting, Product Management	10	21%	9	21%	0	-	0	-	10	11%	9	11%
R&D, Engineering, Technology, Quality Management	9	19%	7	16%	0	-	0	-	9	10%	7	9%
Sales & Marketing, Commercial	19	40%	17	40%	1	2%	1	3%	20	23%	18	23%

Source: LinkedIn. Functions comprised from LinkedIn job categories. % of panellists who displays to hold or have held a job within the function. Academics not included, see methodology section.

**Table I7. Industry experience**

Panellists, Industry experience (Continued next pages)	Leaders				HR				HR & Leaders			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Accounting	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Airlines/Aviation	1	2%	1	2%	3	7%	3	8%	4	5%	4	5%
Automotive	3	6%	2	5%	2	5%	2	5%	5	6%	4	5%

Panellists, Industry experience, Continued	Leaders				HR				HR & Leaders			
Aviation & Aerospace	0	-	0	-	1	2%	0	-	1	1%	0	0%
Banking	2	4%	2	5%	4	10%	4	11%	6	7%	6	8%
Biotechnology	2	4%	0	-	1	2%	1	3%	3	3%	1	1%
Building Materials	2	4%	2	5%	1	2%	1	3%	3	3%	3	4%
Chemicals	1	2%	1	2%	1	2%	1	3%	2	2%	2	3%
Computer Software	2	4%	2	5%	1	2%	1	3%	3	3%	3	4%
Consumer Electronics	0	-	0	-	3	7%	3	8%	3	3%	3	4%
Consumer Goods	3	6%	3	7%	4	10%	4	11%	7	8%	7	9%
Dairy	0	-	0	-	2	5%	2	5%	2	2%	2	3%
Education Management	1	2%	1	2%	2	5%	2	5%	3	3%	3	4%
Electrical/Electronic Manufacturing	5	11%	4	9%	3	7%	3	8%	8	9%	7	9%
Entertainment	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Environmental Services	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Executive Office	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Facilities Services	5	11%	5	12%	10	24%	10	27%	15	17%	15	19%
Farming	0	-	0	-	2	5%	1	3%	2	2%	1	1%
Financial Services	2	4%	2	5%	2	5%	1	3%	4	5%	3	4%
Food & Beverages	4	9%	4	9%	3	7%	2	5%	7	8%	6	8%
Food Production	2	4%	1	2%	2	5%	2	5%	4	5%	3	4%
Furniture	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Government Administration	2	4%	2	5%	1	2%	1	3%	3	3%	3	4%
Health, Wellness and Fitness	1	2%	1	2%	2	5%	2	5%	3	3%	3	4%
Hospital & Health Care	1	2%	1	2%	4	10%	4	11%	5	6%	5	6%
Hospitality	0	-	0	-	2	5%	2	5%	2	2%	2	3%
Human Resources	0	-	0	-	3	7%	2	5%	3	3%	2	3%
Information Services	0	-	0	-	2	5%	2	5%	2	2%	2	3%
Information Technology and Services	8	17%	7	16%	4	10%	4	11%	12	14%	11	14%
Insurance	0	-	0	-	3	7%	2	5%	3	3%	2	3%
International Trade and Development	0	-	0	-	2	5%	2	5%	2	2%	2	3%
Internet	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Investment Management	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Law Enforcement	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Logistics and Supply Chain	1	2%	1	2%	5	12%	5	14%	6	7%	6	8%

Panellists, Industry experience, Continued	Leaders				HR				HR & Leaders			
	1		2		1		2		1		2	
	n	%	n	%	n	%	n	%	n	%	n	%
Machinery	2	4%	2	5%	1	2%	1	3%	3	3%	3	4%
Management Consulting	6	13%	6	14%	13	32%	11	30%	19	22%	17	21%
Maritime	3	6%	3	7%	1	2%	1	3%	4	5%	4	5%
Marketing and Advertising	1	2%	1	2%	1	2%	1	3%	2	2%	2	3%
Mechanical or Industrial Engineering	6	13%	6	14%	12	29%	10	27%	18	20%	16	20%
Media Production	1	2%	1	2%	2	5%	2	5%	3	3%	3	4%
Medical Devices	2	4%	1	2%	2	5%	2	5%	4	5%	3	4%
Military	6	13%	6	14%	3	7%	2	5%	9	10%	8	10%
Mining & Metals	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Non-Profit Organization Management	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Oil & Energy	3	6%	3	7%	4	10%	4	11%	7	8%	7	9%
Outsourcing/Offshoring	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Package/Freight Delivery	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Paper & Forest Products	1	2%	1	2%	0	-	0	-	1	1%	1	1%
Pharmaceuticals	0	-	0	-	3	7%	2	5%	3	3%	2	3%
Plastics	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Political Organization	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Professional Training & Coaching	1	2%	0	-	3	7%	3	8%	4	5%	3	4%
Public Safety	0	-	0	-	1	2%	1	3%	1	1%	1	1%
Renewables & Environment	2	4%	2	5%	3	7%	3	8%	5	6%	5	6%
Retail	3	6%	3	7%	4	10%	3	8%	7	8%	6	8%
Staffing and Recruiting	0	-	0	-	3	7%	3	8%	3	3%	3	4%
Supermarkets	1	2%	1	2%	1	2%	1	3%	2	2%	2	3%
Telecommunications	1	2%	1	2%	2	5%	2	5%	3	3%	3	4%
Tobacco	1	2%	1	2%	2	5%	2	5%	3	3%	3	4%
Transportation/Trucking/Railroad	3	6%	3	7%	0	-	0	-	3	3%	3	4%
Wholesale	1	2%	1	2%	1	2%	1	3%	2	2%	2	3%
Wireless	1	2%	1	2%	0	-	0	-	1	1%	1	1%

Source: LinkedIn. Industry categorization of the companies the panellist is or have been employed in. List source: <https://developer.linkedin.com/docs/reference/industry-codes>, accessed 18 May 2020. % of panellists who displays to hold or have held a job within the industry. Academics not included.

**Table I8. Leader Panellists**

Leader Panellists (Continued on next page)

<b>ID</b>	<b>Job title</b>	<b>Affiliation</b>	<b>Education</b>	<b>Awarding institution</b>
L1	Chief Executive Officer	Atos Medical	Master	Copenhagen Business School
L105	Regional Vice President Latin America	Clear Channel Outdoor	Master	ESADE
L107	Manager DACH	Jalios	Master	Henley Management College
L108	Deputy Head of Global Operations	LM Wind Power	Below	University of Southern Denmark
L109	Chief Operating Officer & Co-founder	Ardacious	Dr. or PhD	University of Queensland
L117	Group Chief Financial Officer	Flying Tiger Copenhagen	Master	Stanford University
L121	IT Director	LSG Sky Chefs	Master	Fundacao Getulio Vargas
L124	Deputy Managing Director	Ulstein International	Dr. or PhD	Henley Business School
L125	Global Sales Director	Peter Justesen Company	Master	London Business School
L132	Director, Sales & Product Business Mgt.	Hiab	Master	Henley Management College
L134	Managing Director	Exomnotho Chemical Solutions	Master	Henley Business School
L139	Chief Executive Officer	Unifeeder	Master	Aarhus Business School
L140	Senior Director Product Portfolio & Business Dev.	Danfoss	Master	IEDC - Bled School of Management
L142	Director	Shortsea Unifeeder	Below	N/A
L143	Senior Manager, Head of Propulsion	MAN Energy Solutions	Master	Copenhagen Business School
L145	Finance Director	Randers Kommune	Master	Aalborg University
L149	General Manager	Priortex	Master	Henley Business School
L155	Global Account Director	ISS	Below	Hogeschool Zuyd
L19	Director of Supply Chain & Global Procurement	Danfoss Drives	Master	Henley Business School
L2	VP, Information Technology & Systems	Sierra Wireless	Master	Henley Business School
L20	Group Senior Vice President - Head of APAC Sales	Nilfisk	Master	Bosphorus University
L26	Managing Director	Quipu GmbH	Master	Henley Business School
L27	Vice President, Head of Business Development	NKT	Master	Henley Business School
L28	Vice President, Digital Brand Sales, Europe	IBM	Master	Henley Business School
L36	Chief Executive Officer	Edgewood Health Network C	Master	Stanford University
L39	Group CFO	GOC	Master	Henley Business School
L4	National General Manager	ISS Facility Services Australia	Master	Charles Sturt University
L40	Head of HR & Payroll	Faxe Kommune	Master	Middlesex University
L41	Vice President, Head of Supply Chain	MorphoSys AG	Master	Henley Business School
L43	Country Director	Ørsted Malaysia	Master	Aarhus Business School
L44	Chief Executive Officer	Advansor	Master	Aarhus University
L49	President	Doré Copper Mining Corporation	Master	McGill University
L51	COO & Executive Vice President	Kopenhagen Fur	Master	DTU, Technical University of Denmark

## Leader Panellists, Continued

ID	Job title	Affiliation	Education	Awarding institution
L55	Military Advisor	Forsvaret	Master	Royal Danish Defence College
L57	Head of Operations	LM Wind Power	Master	Fundacao Getulio Vargas
L58	Head of Command Course	Royal Defence Academy	Master	Roskilde University
L67	COO	EMEA Dentsu Aegis Network	Master	Henley Management College
L73	Country Manager	Unifeeder	Master	Lijnbaan College
L80	Commercial Manager	Vinordia AS	Master	RMIT University
L82	Chief Executive Officer	Techglobal Data Center Inc	Master	N/A
L83	Senior Director, Head of Procurement & PMO	Danish Crown	Master	AVT Business School
L84	Chief Executive Officer	ISS Communication Services	Below	Copenhagen Business School
L85	Chief Executive Officer	Jula Asia	Master	Aarhus Business School
L9	Vice President, Operations China	Vestas Aircoil	Below	VIA University College
L92	Director, Product Mgt. & Product Dev.	Stora Enso Intelligent Packaging	Master	Tampere University of Technology
L97	Area Director West and Central Europe	Unifeeder	Below	Hamburg School of Shipping
L98	Vice President Energy, Utilities & Manufacturing	CGI	Dr. or PhD	Oxford Institute for Energy Studies

Table I9. HR Panellists

HR Panellists (Continued on next page)

ID	Job title	Affiliation	Education	Awarding institution
H1	Vice President / Executive HR Business Partner	Vestas Group	Master	Provana Business School
H10	Talent Acquisition Transformation Lead	Toronto Police Service	Below	Western University
H102	Regional HR Manager	JLT Group	Below	St. Joseph's College
H103	HR Director	Falck Group Sweden	Master	Linköping University
H104	Managing Director	Compass Human Resources Group	Below	Copenhagen Business School
H106	HR M&A Director	Groupe Atalantic	Master	Universita degli Studi di Cagliari
H109	Director, Strategic HR Partner & Head of HR Services	Scandinavian Tobacco Group	Below	AVT Business School
H111	Chief People & Culture Officer	ISS Facility Services Finland	Master	Helsingin yliopisto
H114	Senior HR Manager	Danish Agro	Dr. or PhD	Aarhus University
H115	Executive Vice President, Group HR	DSV Group	Master	Aarhus University
H116	Senior Vice President, HR	ATOS Medical	Master	Roskilde University
H120	VP, Leadership & Organisational Development	Infopro Learning	Dr. or PhD	University of Phoenix
H123	HR business leader/ People & Culture Director	ISS Facility Services Europe	Master	Universiteit Leiden
H124	Senior Manager Employee Relations & General Affairs	Samsung	Master	Henley Business School
H128	Director Potentiality UK	Potentiality UK	Dr. or PhD	Cranfield School of Management
H132	Regional Head of Learning & Development-Asia Pacific	ISS Facility Services Asia Pacific	Below	Melbourne University

## HR Panellists, Continued

ID	Job title	Affiliation	Education	Awarding institution
H135	Director	Health Services 360	Master	University of Oxford
H137	Vice President HR	Danfoss Drives	Below	Southern Denmark Universitet
H144	Strategic Advisor, Researcher and Educator	Elevae	Dr. or PhD	Henley Business School
H149	President of TLC Leadership Options, Inc.	TLC Leadership Options	Dr. or PhD	Benedictine University
H15	Head of Global HR	Cermaq Group	Master	BI Norwegian Business School
H21	Director HR, People Development, Employer Branding	Idea Bank	Master	University of Manchester
H35	Director People & Culture	Nordex / Acciona Windpower	Master	Christ University
H4	HR Director	SKF	Below	Uniwersytet Adama Mickiewicza w Poznaniu
H40	Global Head of Diversity & Inclusion	ISS Facility Services, Global	Master	Henley Business School
H41	Vice President HR/EMEA	Honeywell	Master	Roskilde University
H42	Group HR Director	STARK GROUP	Below	Finanssektorens Uddannelsescenter
H44	HR Director	LEO Pharma	Master	Copenhagen Business School
H49	Head of Learning & Development and Talent	ISS Facility Services, Finland	Master	LUT University
H51	Chief HR Officer	Grundfos	Master	Aarhus University
H52	SVP HR & Group Functions	Bang & Olufsen	Master	University of Western Ontario
H53	Vice President, Head of Health, Safety & Environment	Mærsk	Below	Royal Danish Military Academy
H59	Vice President - Talent & Learning/Development	ISS Facility Services, USA	Below	Saint Joseph's University
H66	Senior Vice President HR	Rosti Group	Master	San Diego State University
H68	Director of People and Organizational Development	Havtech	Master	Marymount University
H80	HR Director	Spirax Sarco	Below	University of Central Lancashire
H81	International HR Executive	Hanesbrands	Master	University Luigi Bocconi
H83	Director Talent Management & Organizational Dev.	ISS Facility Services Germany	Dr. or PhD	Philipps-Universität Marburg
H92	HR Director	DLG	Below	International Marketing
H95	HR Advisor	KCK	Master	Stockholm University
H98	Org. Dev. Consultant & Accredited Full Professor	MINDTRAINING	Dr. or PhD	Johann W. Goethe-Universität Frankfurt

Table I10. Academic Panellists

Academic Panellists (Continued on the next page)

ID	Job title	Affiliation	Education	Awarding institution
A102	Professor of Leadership and Organizational Dev.	Simon Fraser University, Vancouver	Dr. or PhD	Weatherhead School of Management
A115	Professor of Innovation Management	Mohammed Bin Rashid School of Gov.	Dr. or PhD	Bharati Vidyapeeth
A122	Adjunct Professor of Organisational Behaviour	INSEAD	Dr. or PhD	Vrije Universiteit Amsterdam



## Academic Panellists, Continued

<b>ID</b>	<b>Job title</b>	<b>Affiliation</b>	<b>Education</b>	<b>Awarding institution</b>
A123	Assistant Professor of Leadership Studies	U.S. Army War College	Dr. or PhD	The George Washington University
A124	Professor of Management	University of Tasmania	Dr. or PhD	Curtin University of Technology
A127	Professor of Management Knowledge and Learning	Henley Business School	Dr. or PhD	Henley Management College
A13	Adjunct Professor of Leadership	Uni. of Chicago Booth School of Business	Dr. or PhD	The George Washington University
A146	Vice Chair	Lincolnshire CCG	Dr. or PhD	Brunel University London
A15	Prof. in Leadership, Dir. Henley Centre for Leadership	Henley Business School, Uni. of Reading	Dr. or PhD	Leibniz Universität Hannover
A16	Professor of Management & Sociology	Bentley University	Dr. or PhD	Boston College
A160	Professor of Leadership & Higher Education	Andrews University	Dr. or PhD	University of Louisville
A167	Associate Professor	Brigham Young University	Dr. or PhD	Arizona State University
A178	Senior Lecturer in Strategic Management	Cranfield School of Management	Dr. or PhD	Cranfield University
A2	CEO/Assistant Professor	Colorado Technical University	Dr. or PhD	Pepperdine University
A27	Professor of Leadership, Acting VP International	Western University	Dr. or PhD	The Ohio State University
A31	Professor in Leadership in Education	Windesheim Flevoland	Dr. or PhD	Utrecht University
A32	Professor of Leadership and Management	University of the West of England	Dr. or PhD	University of Exeter
A48	Adjunct Prof., Leadership, Co-Head EMBA Leadership	HEC Paris	Dr. or PhD	Cornell University
A5	Adjunct Professor, Strategy	Kellogg School of Management	Dr. or PhD	Northwestern University
A52	Professor in Global Leadership	Nanyang Business School	Dr. or PhD	University of Geneva
A67	Professor of Management studies ENCG	ENCG Casablanca	Dr. or PhD	Université Pantheon Assas
A68	Faculty, Doctoral Leadership Program	Creighton University	Dr. or PhD	Penn State
A70	Associate Prof. of Management & Global Leadership	University of Delaware	Dr. or PhD	Florida International University
A74	Professor, Columbia U. and SVP, CCL	Teachers College, Columbia University	Dr. or PhD	Purdue University Krannert School of Mgt.
A77	Professor, Corporate Governance & Leadership	Hogeschool van Amsterdam	Dr. or PhD	University of Amsterdam
A79	MBA Program Director	EGADE Business School	Dr. or PhD	EGADE Business School
A84	Associate Professor Leadership	University of Stavanger	Dr. or PhD	University of Stavanger
A87	Michael H. Jordan Professor of Management	Yale University	Dr. or PhD	University of Michigan
A93	Professor, Thought Partner on HR	University of Michigan	Dr. or PhD	University of California
A95	Professor	James Madison University	Dr. or PhD	Uni. of Iowa Tippie College of Business
A96	Adjunct Professor, Strategist, Researcher	University of St. Thomas	Dr. or PhD	University of Saint Thomas

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## Appendix J. Content Analysis, Additional findings

This appendix comprises the additional findings from the content analysis related to each hypothesis. The appendix is organised around the numbered hypotheses.

**H<sub>1</sub>:** The intention to pursue exploitation and task performance can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** An essential choice in the pursuit of exploitation and task performance is recognising which processes or functional areas should be standardised to drive optimisation; and which are better delegated with the freedom to decide how to operate (L117; L2; L125; H53). Simultaneously, to balance the loss of autonomy in the employee's jobs resulting from the 'push' for exploitation and task performance, attention and energy should be invested in engaging and motivating people (A68; A96; H98; L109; L121; L49). In continuation, a crucial component of driving exploitation, which the leader should secure, is the presence of sufficient competencies and insights within the core functional processes in the team (H42; L4).

**H<sub>2</sub>:** A leader can promote exploitation and task performance by influencing the relevant contextual factors that can be changed within their leadership context.

**Additional findings from the qualitative analysis:** The analysis of the comments revealed that when shaping the context to promote exploitation and task performance, the leader should balance three elements. Firstly, the people's competence level; secondly, the level of system-determined operations, e.g., processes in an IT system or the production line design; and, thirdly, the documentation level of business processes and the adherence behaviour, i.e., the climate for diligence and discipline. Each of these elements can influence exploitative performance, and the leader should be cognizant of what can be shaped; and how to align and embed the three for optimal performance (H53; L200; L125). Shaping the context must vary with the type of function. For example, in manufacturing, variation-reduction is a value-driver, while in the customer service centre, flexibility with empowered mandates can represent a crucial value driver (H53; L125; L2). Related to formalisation, the leader should refrain from formalising to the extent that discourages initiative and critical thinking because compliance can become an aim, which is not necessarily conducive to optimal performance (A127; H53; L113; H144; A160).

**H3:** The intention to pursue exploration and adaptive performance can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** When the external environment demands a flexible and contingent organisational functioning due to foreseeable variation, the leader should develop requisite 'standardised' adaptive performance (L125). Notably, the need for adaptive performance flowing from either ambiguity or patterned variability does not mean that subprocesses cannot be standardised (L125; A123; A31). On the contrary, it seems that adaptive performance is well supported by the contingent composition of know subprocesses, e.g., combining known elements differently or contingently re-ordering processes; while critical and lateral thinking becomes more critical when the ambition is innovation or disruption (L82; A124; H53; L200). Conversely to the effect of severe resource constraints, abundant resources can have an attenuating effect on the willingness to take the risk of exploring (L109). It is vital for the leader to compare the choice to explore with the possibilities for continuous improvements as the leader should 'never change a profitable process' (A31). No matter what, path dependence due to constraints, resource abundance or habits demands that the leader drives exploration with a bold mindset of 'questioning the status quo' rather than 'don't fix what isn't broken' or 'don't rock the boat' (A122; A115; A160; H42; L36).

**H4:** A leader can promote exploration and adaptive performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Additional findings from the qualitative analysis:** The leader needs to be cognizant of how to establish structural boundaries between exploration and exploitation to ensure buffering, so exploration is not hindered by elements of an exploitative approach (A160; A96; H42).

**H5:** The intention to pursue human capital quality and contextual performance can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** Important elements in developing people to develop the business performance are assuming a long-term development perspective; active role modelling; facilitating vicarious learning, e.g. peer to peer onboarding; and ensuring continuous behavioural feedback from a line of sight to the intended business outcomes (H81; A27; H98; L92; L109). A weak climate for fairness and justice related to the people development practices can hinder the development of contextual performance, and it can threaten the retention of key people (L200; L20; L105; A31; L108). Hence, the leader should invest energy in securing procedural, interactional and distributive justice.

**H6:** A leader can promote human capital quality and contextual performance by influencing the relevant contextual factors that are possible to change within their leadership context.

**Additional findings from the qualitative analysis:** The effect of staffing and developing people depends on understanding the organisational intentions and job conditions for the target positions, individuals and teams, and allocation of sufficient resources (H53; A96; L125; A27; A31; A160). If the HR policies and the organisational enactment drifts away from being 'fit for the organisation's purpose or strategic intentions' to accommodate other demands like legislative, political, or public opinion, it can hinder performance (A123; H83; L125). For example, when a leader in an organisation must promote people based on job tenure.

**H7:** Physical distance can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** When leading over the distance, collaborating needs to be more structured; more disciplined; and more proactive to allow preparation and compensate for not having the same informal contextual information flow (H53; L43; A172; H116; L58). Ground rules for distance collaboration should be created through involvement, ensuring both expectation-, enactment-, and alignment-based strength (A130; H123). Also, the leader should ensure that all team members meet regularly and synchronously on the richest possible media to compensate for the attenuating effects separation exercises on communication (H59; A130; L67). The importance of building trust and social capital and scheduling more informal check-ins across the team to compensate for not meeting at the coffee machine goes up when the team is dispersed (H53; H144; L139; L43; L107; L113; A31). In that vein, it is important to meet physically when possible to build the fundamental trust, cohesion and common ground in a team (H59; A27; H83; L121; L43). The importance increases if the team comprises both employees co-located with the leader and distance employees (A127; L20).

**H8:** Physical distance can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** The structured way of working frequently implemented to mitigate the effects of distance can increase meeting efficiency, planning quality, focused decisions and precise coordination compared to the practice in fully proximal settings (L138). The higher the interdependency of the work assignments in the team, the level of newness, the demand for innovation, or the diversity in the team, the more difficult distance makes it (A74; L200; L36; L9). The hindering effects of distance are intensified when there are also time zone differences driving the use of less rich media, such as mails and more asynchronous communication (A32; H144; L200; L4). The hindering effects can be mitigated by the availability of IT Communication (ITC) tools in conjunction with a higher level of competencies in using such tools among team members; and conversely, poor access or ITC competencies intensify the hindering effects of distance (A115; A48; L200; H10; L107; L105; L98; A127).

**H<sub>9</sub>:** Risk intensity can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** The qualitative analysis confirmed strongly that risk intensity influences the choice of leader behaviour (A172; A48; H80; H46; H1; L200; H144; A74; H101; L41). The importance and effect of formalisation of assessment, preventive or mitigative procedures; and the repetition (assessment), reinforcement (preventive) and rehearsal (mitigative) hereof increase with risk intensity (L107; L58; L121; L108; L43). Risk intensity is perceptual as it hinges on assessing the potential harm of threats and is therefore attenuated by the leader's and follower's risk interpretation and the strength of the safety climate (A127; A32; H83; L109; L2). To accommodate a high-risk environment, a leader should build an empowered organisation capable of self-initiated risk assessment, prevention and mitigation (H101; H53; L109; L49). In this manner, the state of crisis and time interacts with risk intensity as both can increase the error criticality of a given risk. The particular risk might not be so critical if the company is not in crisis in other areas, or there is ample time to investigate and act (A127; L92; H98; A124). Finally, the importance of stakeholder management towards decision-makers influencing the leader's leadership context aimed at managing the expectations, anticipating risk scenarios and allowing timely decisions increases with higher risk intensity (L57; L200).

**H<sub>10</sub>:** Risk intensity can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Mitigating risk directed towards other elements can increase motivation and performance, for example, reducing the environmental risk or contributing to saving another part of the company (A124; L36). The hindering effect of risk increases when the consequences become personal to the team member or the leader, and the effect is related to an individual's level of risk averseness (L1; A115; A96; H59; H124; L39; A160). If risk intensity makes a leader micromanage to stay in control, it can weaken the climate for empowerment (L125; L57; A123; L43; L92). Moreover, a weaker climate for collaboration intensifies the hindering effects of risk intensity on leadership effectiveness and team performance (H41; L82).

**H<sub>11</sub>:** External complexity can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** A couple of suggestions are worth noting. L92 suggests that the importance of scenario planning to inform decisions increases. It is also suggested that the leader recruit people who can handle ambiguity (H42; A32) and build absorption capacity in the organisation (L20).

**H12:** External complexity can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** The remarks highlight that an organisation is not 'an island', i.e. it is an open system, and the leader needs to monitor and assess the external complexity (L108; L109; L125; L26; L28; L43; L44; L85; A127; A2; A27). Related hereto, H53 highlights that '*some of the key decisions to make is where to invest in people, in systems, and in processes/procedures*' and A79 concurs with a similar point. L134, A122 and A77 point to the importance of leading and deciding from a strong understanding of the organisational intentions when facing high complexity.

**H13:** External dynamism can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** Some panellists report a difference between disruptive and repeatable dynamism (A31; A74). They differentiate between leading in response to known dynamic patterns of a given industry, e.g. FMCG or Banking (H42; L105) and facing unforeseen disruptive dynamism, e.g. the impact of Covid-19 or the disruption from new technology (A68; A87; H81).

Organisational agility is highlighted as important in response to external dynamism. Agility rests upon the empowerment of the organisation (L57; A130), the facilitation of a strong climate for explorative learning (A48; L43) and a strong climate for change (L107; L125; L27). If acting under high external dynamism playing out in recognisable patterns, agility can be supported by formalising standard responses to the variations. However, if the formalised processes, habits and resulting path dependence do not reflect the necessary contingent nature and empowered mandates, such processes will hinder performance (L27; L43; H81; H68).

**H14:** External dynamism can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Answering '*neither agree nor disagree*' H10 explains that the answer relates to the importance of leading from intention rather than just responding to high external dynamism with fast decisions per default; or to low dynamism with decisions based on established assumptions. Other panellists who answered Agree or Strongly agree concurred (H92; H41; L26; A122; A127). Also, some panellists emphasised systematising decision processes and building competencies to know when to decide fast and when to decide slowly as critical features for effective organisational functioning responding to external dynamism (H53; H81; L155; L26; L57; L82; A68; A70). A failure to do so can result in a stagnant organisation and poor performance (L84; A32; A77). Several panellists recommended considering the design of the systemic structures to achieve a requisite fit, for example, the proper decentralisation and the adequate formalisation to empower necessary local autonomy (H81; H104; L58; A13; A160; A32; A68; A70; A79). Finally, there were remarks that higher external dynamism demands requisite competencies (H104; L39) and strong operating standards for the elements that can be standardised (H104; L84) to mitigate the adverse effects.

**H15:** The hierarchical level can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** The demand for shifting towards long-term perspective and more principled decisions is related to moving up the hierarchy (H1; A160; A77). Nonetheless, the leadership platform in terms of organisational purpose, leadership values and ethical code remains the same no matter the hierarchical level (L108; H53; L109; L55, L82, L84). Round two confirmed that no matter the hierarchical level, the person's authenticity and personal leadership qualities remain highly important to leadership effectiveness (H137; L2; L55; L67; L84; A123; A124; A27). The further a leader moves up the hierarchy, the greater the potential for her role modelling to influence organisational members (L139; L109; L143; L39; L73; A124; A127; A32).

**H16:** Hierarchical level can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H17:** Centralisation can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** Centralisation is an active leadership tool that interacts with risk intensity as a leader can maintain control by centralising certain decisions for a period (L92; L57). Conversely, the leader can drive flexibility and faster frontline response by empowering through decentralisation of decision authority (L108; L36; H81; L43).

**H18:** Centralisation can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** The positive or negative effects on decision speed seem related to how clearly defined the decision scope can be delineated and communicated (A96). External dynamism increases the relevance of such decentralisation (L36; L200), which, in turn, means that centralisation can hinder effective leadership and performance in dynamic environments. A similar hindering mechanism occurs between high centralisation and geographical dispersion (H81; H92; A96). Centralisation interacts with the expectations embedded in national culture. Some cultures prefer to escalate decisions, impairing any intended positive speed, flexibility, and empowerment effects of decentralisation (L57; L92). Conversely, the value-driven expectations to autonomy in some national cultures can result in adverse effects from a centralised organisational setup (L92; L57). Decentralisation, in conjunction with higher levels of expertise among the staff, interacts positively and drives explorative performance, creativity, and empowered action (A31; A84, L43). Conversely, driving profitability, efficiency or risk mitigation through standardisation interacts positively with centralisation (A31; L36).

**H19:** A leader can increase or decrease centralisation in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** The strategy can differ across functions or processes. Some functions or processes can have low degrees of freedom for changing centralisation, for example, in a highly standardised shared service setup or a strongly aligned digital marketing process (L39; L36; L57; L82; L97). The degrees of freedom to increase or decrease centralisation are linked to positional mandate, as higher hierarchical positions have greater opportunity to influence what can be decentralised (A102; A127; A32). The company's climates for diligence and discipline and the climate for empowerment will influence the degrees of freedom for decentralising (L107; L43; A95). Decentralisation should be supported by organisational mechanism for deploying direction, strategy and focus, i.e. the 'what' (L109; L125; L43; L98). Also, there should be mechanisms between leadership levels for agreeing on the climate/behavioural expectations (rules, regulations, policies, procedures) and behavioural alignment for the key climates, i.e. the 'how' (L109; L125; L39). Finally, mechanisms for coordinating decisions and resourcing between organisational levels and across functions to deliver on the 'what' and the 'how', i.e. the 'when and whom', are mentioned as important by L109. The effect of decentralising to empower performance depends on competencies that can turn the decentralised mandates into performance. Hence, the decisions to decentralise should include assessing the maturity and quality of the Human Capital in the organisation (L26; L57).

**H20:** Formalisation can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** Formalisation can be used by the leader to develop substitutes for leadership by establishing joint frames of references about conduct, processes, and decisions (L43; H101; L9). For example, when the leader involves a team in establishing formalised behavioural expectations and joint interpretations in a previously non formalised area (L200; L107; H53).

**H21:** Formalisation can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Formalisation was highlighted as important for certain contextual settings as the basis for aligning expectations about how to communicate, collaborate and operate.

That is, when collaborating over the distance, in higher risk intensity or situations with interdependency between departments (L67; L58; L113; L134; A32; L107; L43, A130, L140; A96).



**H22:** A leader can increase or decrease formalisation in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** It was highlighted that the leader can decide formalisation in some cases. In other cases, the relaxation or tightening must be escalated for decision; other departments must be involved for alignment; or deliberate non-compliance is a leadership judgement remaining internally (L109; L82; L57; H53). A higher level of staff churn, a lower level of maturity and low competence levels increase the relevance of formalising. In such cases, it creates a consistent foundation for conveying behavioural expectations, onboarding newcomers and reinforcing desired ways of operating (L201; L200).

**H23:** Internal complexity can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** The round two comments confirmed round one finding that higher internal complexity incurs a need for more competent staff since the leader must trust and rely on the insight and judgments in areas she does not master herself (H42, H10, H103). Finally, it was highlighted by H53 and H81 that the leader should invest energy in bringing down non-value-adding internal complexity.

**H24:** Internal complexity can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** There is a risk that high complexity slows down responsiveness; leads to postponing decisions; makes people more reactive; makes simple processes more cumbersome; and increases uncertainty (L27; L1; H144; L108).

**H25:** A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** The panellists commented that a leader should always be asking why internal complexity exists and de-complicate matters if possible to promote focused efforts (L27; L84; L49; L2; H81). Simultaneously, the leader should recognise and maintain the necessary levels of internal complexity needed to deliver on the strategy (L44; L27; L2; L125; L105; H41). Also, a strong goal-path climate with clear prioritisation and performance management can decrease internal complexity (H42; H135). Moreover, formalising and aligning processes, automating procedures, and consolidating similar tasks into shared services can decrease internal complexity (L39; L36).

**H26:** Interdependence can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** When interdependent parties have competing goals or an unequal amount of 'skin in the game' into the intergroup performance, there is a risk that should be mitigated by creating a strong joint path-goal climate and a cross-group climate for collaboration (L200; A124; A96). Facilitating strong coupling in the interdependent exchanges leads to more qualified, better-coordinated solutions, and the leader should act as a boundary facilitator paving the way and handling disruptions (H98; H116; A123).

**H27:** Interdependence can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H28:** A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** Increasing interdependency should be followed by sense-giving and active stakeholder management to make people invest their energy in 'chosen' interdependence and break any path dependence maintaining old habits (L39; H103; H135; H15; H42; L43; A79; A95).

Increasing or decreasing interdependence is linked to the wider systemic structures in the company and can sometimes only be significantly changed by escalating decisions to the company process owners or those in charge of the organisational design (H53; L109; L134). Another path is working with delegated business responsibility decreasing interdependence with smaller independent organisational units (H81; L139; L85).

**H29:** Resource constraints can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** Actively constraining resources to help part of the organisation focus on priorities, create a sense of urgency, or maximise the resource utilisation is another choice in the leader's toolbox (L200; L36; L125). The more severe the resource constraints, the more important involvement becomes as motivation and joint ownership when facing significant challenges with scarce resources is key (L82; L108).

**H30:** Resource constraints can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Moderate resource constraints can hinder performance by driving risk awareness; unwillingness to invest in exploration; or resistance towards 'rocking the boat' or jeopardising the equilibrium (L140; A123).

Often hindering resource constraints can be related to certain critical resources; be that expert employees; certain tools or materials creating bottlenecks in the organisation (L117; L27). Another hindering effect stems from the propensity to use an allocated budget to secure that the budget is reassigned. In turn, this practice increases resource constraints inhibiting adequate reprioritisation of the resources (A123; H53).

**H31:** A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context.

When reprioritising resources, the leader should follow the strategy to ensure that competing resource constraints, do not result in unintended suboptimal resource allocation or scoping of the performance demands (L44; L57; L82; L85).

Besides reprioritising, the leader can influence resource constraints by negotiating more resources or scoping performance requirements in the budgeting process, operational planning process or business cases for investments, projects or transformations (L92; L2; L36; L39; A122; A127; A84). L73 and L84 commented on disagreeing because resource constraints are outside the leader's control; else, it is not a constraint. A123 maintained SD from round one and referred that leaders in public organisations '*have no say whatsoever*' regarding resource constraints as allocation is determined by the '*resourcing process*' outside the leader's control.

**H34:** The climate for exploitative learning can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** A strong climate for exploitative learning can hinder performance in the instances where the optimisation mindset drives out all slack leaving the organisation with no flexibility, or where the mindset drives a leader behaviour of 'having to spend to budget' to ensure the same amount is allocated for the coming period (A123). To fully release the potential, the climate for exploitative learning should act in concert with a strong climate for collaboration and for productive discussion (A84; A96; H92; H42; L41; L49; H123).

**H35:** The climate for exploitative learning can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** The comments drew the attention to that strengthening the climate must take place based on an understanding of the organisational exploitative ambition level (A127; H116). Also, a lack of role modelling from the top and missing alignment of behaviour among the leaders weakens the climate (L43; L27; A27; A160; L125; L82).

**H36:** The climate for explorative learning can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H37:** The climate for explorative learning can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** The qualitative input highlights that a sufficient level of calculated risk tolerance and infusing an attitude of 'fail early, fail often' or 'fail fast, fail forward' is an integrated part of a strong climate for explorative learning (A160; L2; A48; L107; L105; L108; L200). Also, that even more than for the climate for exploitative learning, the climate for explorative learning needs to be assisted by a strong climate for collaboration and productive discussion as participative safety and divergent thinking are main components (L2; A160; L121; H98; L36; L57; L92).

**H38:** The climate for change can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** A part of a strong climate for change also encompasses the practice of identifying, assessing and translating external changes to necessary internal adjustments (L36; L9; L82; L200; L105; L125). Also, a strong climate for change allows maintaining focus on running operation, which is not changing without letting a change in an adjacent area bog down the non-affected areas (A96; L27; H98). Moreover, a weaker climate for change equals lower organisational coping capacity resulting in faster change fatigue when faced by major transformations (A123; A84).

**H39:** The climate for change can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** Hiring people with an adaptive attitude and mindset is a way of strengthening the climate for change (A31; L20; H98; A27; H42). Also, the leader's attitude, openness to change, and divergent perspectives own reactions to change exercises a strong role modelling effect on the organisation's willingness and response to change (H68; A124; H81; L43; L109; A27; H59; H124; L139; L142). A strong climate for change is reinforced by a strong climate for productive discussions (A124; L109), a strong climate for empowerment (A84), and a strong climate for collaboration (H42; H98; A84). An important role for the leader is continuously assessing the potential ramifications from changing conditions; and subsequently insisting on proactively responding with internal changes (L105; L82).

**H40:** The climate for diligence and discipline can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H41:** The climate for diligence and discipline can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** The focus can be on ensuring accountability to the 'how' of doing things, as well as being disciplined in holding each other accountable to agreed outcomes or actions, leaving the 'how' unregulated. Thus, a strong climate encompasses clarity on whether 'following protocol' or 'delivering as committed' or both is in focus (A160; A31; A96, H42, L109; H53). In conjunction, ensuring that standardised disciplined practices, demands, commitments and holding people accountable are clearly and frequently linked to 'why' and overall purpose is vital for sustaining a strong climate for diligence and discipline (L200; A123; L125).

**H42:** The climate for goal-path clarity and stretch can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** The comments from the HR and Leader panels signal that understanding the overall company's direction and strategy helps performance and motivation (L20; L109; H10; L43; L139). Moreover, organisations with a 'stretch' mindset help performance through constantly raising targets and challenging themselves to deliver as 'shooting for the stars make you try harder' (L36; L108). Besides the hindering effects of a weak climate, a strong climate for goal-path clarity and stretch focused narrowly on performance efforts can demotivate employees with a high need for autonomy and mastery and impede empowered initiative (A123; L125).

**H43:** The climate for goal-path clarity and stretch can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** For a goal-path and stretch climate to support performance optimally, the goals and KPIs must be aligned to the prioritised strategic organisational goals and the outcome attainment activities (H83; L200; L105).

At times, the KPI regimes are not fit for purpose resulting in energy and focus spent on things that hinder optimal performance (H42; L200). In that respect, it is imperative to ensure that when goals change, the goal interpretation process is repeated (A115; H106; L20; L200). Also, the leader should set direction and goals in his leadership context, no matter if direction and goals are provided from above (H42; L121; A127; L58). When doing that, the individual goals should be nested in overriding team goals supplemented by a clear joint understanding of the team goals for these to serve as a coordination and prioritisation mechanism (L200; H98). Also, it is key to clarify competing priorities and conflicting objectives also outside the team, influencing the team's goals (L20; L27; H92). As a nuance, to fully leverage this nested understanding from vision and purpose over the team and individual goals to the individual efforts and accountabilities, the leader should lead based on each particular employee's motivational drivers (A96; H98).

**H44:** The climate for service can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H45:** The climate for service can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** None.

**H46:** The climate for collaboration can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** A lack of trust along with weak operational and, or collaborative awareness can result in internal competition; suboptimisation; silos; and an 'us and them' attitude (L9; H42; L20). Conversely, a strong climate for collaboration with too much emphasis on including everyone in everything and reaching consensus in the name of collaboration hinders effective decision making and performance (A96; H98). Together these effects, revolving around withdrawal versus participative behaviour regulated by the level of participative safety, indicate an attenuating or intensifying effect from a weak climate for collaboration upon all other climates.

**H47:** The climate for collaboration can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** The climate can be strengthened by communicating a shared vision and sensitising teams and team members to how collaboration enables reaching the vision (A124; L20; L27). The common ground pertaining to operational awareness can be strengthened by educating staff to 'have a basic understanding of all the tasks in the organisation' and by rotating people between departments (L49). Finally, recruiting people with a collaborative propensity can strengthen the climate (H59; H124; L140).

**H48:** The climate for productive discussions can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Participating in productive discussions builds critical thinking competencies; establish shared understandings; promotes better productive discussions; enables employees to do more self-directed qualified decision making; increases organisational decision speed; improves conflict resolution; and promotes learning (L27; H101; A68; L201; A123; L4; L92).

**H49:** The climate for productive discussions can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** Educating team members in preparing, participating in and facilitating productive discussion has a positive effect in empowering the practice (L109; L121; L140). Also, setting the tone for productive discussions fosters a genuine openness to differing views and being comfortable with constructive disagreement from the leader (H10; A96; H59; H53; H98; H42; L200).

**H50:** The climate for fairness and justice can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** In round two, the HR panellists remarked that an explicit and jointly interpreted code of conduct in conjunction with a pattern of transparency and consistency in leadership agency is imperative for a strong climate for fairness and justice (H104; H109; H144; H41; H92).

**H51:** The climate for fairness and justice can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** None.

**H52:** The climate for empowerment can help or hinder either leadership or work performance.

**Additional findings from the qualitative analysis:** The remarks in round two signal that empowering followers must evolve with the maturity in enacting the delegated responsibility and the competencies to lift the accountabilities. Hence, the climate for empowerment must be grown over time (L109; L108; L57; L92). L92 remarked that the terminology became clearer with the change from 'following' to 'empowerment' and commented that the systemic level of centralisation is closely linked to the climate for empowerment.

**H53:** The climate for empowerment can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** Empowerment fosters building competencies to meet the increased accountability and the effect of a strong climate for empowerment if intensified by a strong climate for explorative or exploitative learning depending on the tasks (L57; L43). Examples of practices embracing the benefits of a strong climate for empowerment are the agile project methods and learning organisation principles which have emerged over the past decades, which would not function in a weak climate for empowerment (L43, L57).

**H54:** The climate for safety can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H55:** The climate for safety can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** None.

**H56:** The climate for ethical conduct can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** The comments pointed to interesting nuances. When a leader decides and acts in accordance with accepted moral norms, be that the formal company ethical code, or nonformalised widely accepted moral standards, it lays the foundation for trustworthiness (A123; L140; A124; L92). A weaker climate involves that the individual moral standards are prevailing as the basis for judging the company's ethical code, and the ethical conduct from peers and managers, which in turn, can impair the trust in leaders or incur insecurity about the company's ethical stance (H42; A127; L9; L108).

**H57:** The climate for ethical conduct can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** The analysis of the comments indicates three ethical levels; first, the ethics in doing what the company does, e.g. selling cigarettes or extracting fossil oils. Secondly, the ethical code of how the company does business, e.g. no child labour or no bribery. Thirdly, the ethics involved in moral intense dilemmas or 'grey areas' where the why rests on qualified judgement calls, e.g. medical or social welfare decisions (A123; A31; L20; A115; H98; L200). This is an area where consistent moral conduct is imperative because one bad case can undermine the leader's credibility as '*ethics is everything in leadership*' and must be considered a 'table stakes' issue (H124; L36; A27; H35; L200). The climate can be further strengthened through formalised mechanisms to ensure that organisational members can safely call out misconduct; and ensuring that these are acted upon (L109).

**H58:** The climate for sustainability can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** None.

**H59:** The climate for sustainability can be strengthened through leadership interventions.

**Additional findings from the qualitative analysis:** None.

**H60:** The value composition and diversity among the people the leader leads can influence the choice of leadership behaviour.



**Additional findings from the qualitative analysis:** In conjunction with adapting the leadership style to the value-based expectations to maximise leadership effect, the leader should establish common values; engage the team in interpreting these into expected behaviours; role model these behaviours; exercise reinforcing and corrective interventions; and repeatedly engage in sense-giving around the expectations (L92; L200; A127; A124; A96; H42; H124; L58). Many companies have established a company value set, which the leader can use for the interpretation process leading to jointly accepted behavioural expectations in her team (H42; L92; L58). To release the potential of diversity, the leader should balance the joint value-based behavioural expectations with embracing the differences and potential of diversity in thinking (L109; L82; L57; A123).

**H61:** The value composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Common ground stemming from value convergence among team members can positively influence team cohesion, collaboration and coordination; establish participative safety; and increase the sense of belonging (L201; A127; A124; L109; H144). However, a very homogeneous value composition can lead to groupthink and path dependence in an organisation, making change and development complex (A123; H98).

**H62:** A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** None.

**H63:** The personality composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** To form a foundation for understanding personality and promoting effective working and collaboration, several panellists suggest the leader engages in team building.

The team building should encompass a personality model and build a shared language and understanding of personality differences (L201; L121; H98; L109; L92; A160; L49). Relatedly, a leader's choice to engage in developing self-awareness to better interact with and influence the different personalities in the team is important (A96; L57; L92; L201; A115; A160).

**H64:** The personality composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Releasing the potential of personality diversity fosters a sufficient level of trust and cohesion; common ground; joint behavioural code; mutual understanding and respect; and tolerance for differences (L125; A31; L4).

The diversity-cohesion balance should be kept at a level where groupthink, i.e., too strong homogeneity without productive discussions, does not emerge (A123; L109; H10).

**H65:** A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** A123, who answered SD in both rounds, explained: *'My answers here are partly a result of the overall difficulty of hiring and firing actions in public sector organisations.'* A123 elaborated that a leader can only change an employee if she does *'something illegal or unethical'*; otherwise, *the leader's hands are tied.* Illuding to a similar point, A87 answered D also in round two because *'if leaders had this kind of control, the world would be vastly different!'* Also, there was agreement that it is important to understand your own and the employees' personalities as a foundation for effective leadership (A127; A146; A160; A48; A79; A84). In line with the Academic panel, L57 and L82 commented that understanding personalities and personality composition is a precondition for effective leadership, staffing and securing sufficient diversity to promote performance.

**H66:** The expertise composition and diversity among the people the leader leads can influence the choice of leadership behaviour.

**Additional findings from the qualitative analysis:** None.

**H67:** The expertise composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.

**Additional findings from the qualitative analysis:** Requisite levels of relevant task and contextual expertise help handle the effects of higher external complexity, dynamism and risk intensity by increasing the distributed coping capacity in the team (A32; L109; A84). Also, expertise helps work performance and leadership. Trust and motivation are positively influenced by experiencing high expertise among the ones an employee interacts with and depends on when solving tasks and overcoming challenges (L109; L82; L57). Relatedly, standardising and aligning ways of working can be more difficult when team members hold high task mastery, e.g. in a professional service firm or among faculty in a higher academic institution (A31).

**H68:** A leader can change the expertise composition and diversity in their leadership context within the limitations given by the organisational and external context.

**Additional findings from the qualitative analysis:** None.

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## **Appendix K. Comments from Panellists changing answers from Round 1 to Round 2**

This appendix summarises the comments left by Panellists in round two, who explained changing their answers from round one to round. The appendix naturally pertains to the moves commented on, while the moves made without comments are not accounted for herein. Also, the comments already included in the reporting of the results are not accounted for herein.

**H<sub>12</sub>:** External complexity can help or hinder either leadership or employee work performance.

Two panellists explained their convergence towards a stronger agreement because of acknowledging that the causal effects are there even when attenuated by the team capabilities or the active leadership agency. H103 moved from N to A, and A146 moved from D to N.

**H<sub>14</sub>:** External dynamism can help or hinder either leadership or employee work performance.

H68 and L44 remarked on changing towards a stronger agreement, from N to A, referring to the summary of input from round one.

**H<sub>15</sub>:** The hierarchical level can influence the choice of leadership behaviour.

H149, H98, L49, L57, L73, and A48 all referred to the summary from round one as the reason for changing their answers from D or N to A.

**H<sub>16</sub>:** Hierarchical level can help or hinder either leadership or employee work performance.

The comments left explained that L20, L57, A124 and H116 changed answers from N to A; L145 from D to A; L44 from D to SA; and A77 from missing to A due to reflections on the input from round one.

**H<sub>19</sub>:** A leader can increase or decrease centralisation in their leadership context within the limitations given by the organisational and external context.

L125 and A122, who changed from D to A, and L132 and L73, who went from N to A, remarked on their change as grounded in reflections on the summary of input from round 1.

**H23:** Internal complexity can influence the choice of leadership behaviour.

H10, H103 and H128, who commented on their changes from N to A, referred to the input from round one acknowledging that internal complexity can influence the choice of leadership behaviour.

**H25:** A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context.

L84 and L125 commented that they changed from N to A; L67 from D to A; and L49 from D to N due to the perspectives summarised from round one.

**H28:** A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context.

H104 and A13, who did not answer in round one, responded with an A in round 2. H116, H123, L43, L67, A115, A146 and A32 moved from N to A, commenting that the move was warranted by reflections triggered by the input from round one. H21 commented on becoming doubtful about the leader's opportunity to increase or decrease interdependency and changed the answer from SA to N.

**H31:** A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context.

H42 moved from N to A and A95 from D to A, commenting on reflections following the summary from round one. L43 apologised for not answering in round one and chose A in round two.

**H44:** The climate for service can help or hinder either leadership or employee work performance.

H1 and H10 commented on changing from N to A because of acknowledging the other panellists' viewpoints from round one.

**H45:** The climate for service can be strengthened through leadership interventions.

H137 and H21 remarked on changing from N to A due to becoming aware of the role leadership plays given the other panellists' comments. H53 used the same explanation answering A in round two following a missing answer in round one.

**H50:** The climate for fairness and justice can help or hinder either leadership or employee work performance.

H15 commented on moving from N to A given the feedback from the other panellists in round one.

**H51:** The climate for fairness and justice can be strengthened through leadership interventions.

H21 commented on having changed from N to A after reading the input from round one.

**H52:** The climate for empowerment can help or hinder either leadership or work performance.

L107 and L73 moved from N to A, referring to the comments from round one as the reason. L28 stated to have misunderstood the question in round one and moved from D to A.

**H53:** The climate for empowerment can be strengthened through leadership interventions.

L107 answered A after having missed answering in round one. L108 and L109 moved from N to A, commenting that the summary from round one made them change. L20 changed the answer from N to SA with the remarks: *'I don't honestly know how I ended up giving a response of "neither agree nor disagree". I must have made a mistake here.'* Finally, L28 repeated the statement from the previous hypothesis about having misunderstood the question in round one and moved from D to A.

**H54:** The climate for safety can help or hinder either leadership or employee work performance.

L109 changed the answer from N to A warranted by the input from round one. L124 referred to having answered SD by mistake in round one and changed to SA. L28 explained having misunderstood in round one and moved from D to A. Finally, L44 and L9 made the same move due to being informed by the other panellists' insights.

**H62:** A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context.

As the only one H128 noted on changing the answer, moving from D to A, due to the summary from round one.

**H65:** A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context.

H128 changed from SD to A, acknowledging that changing the composition is possible while changing personalities is not. H104 moved from a missing answer to A, confirming the specification made in the round one summary. H41 and H42 moved from N to A, commenting on agreeing that discharging and recruiting people is a pathway to changing composition. Also, A102 changed answer from N to SA, and A77 from N to A, acknowledging in their comments the difference between changing personality and changing the composition of team members.

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## Appendix L. Quantitative results, Delphi, Rounds 1 and 2

This appendix comprises the consensus tables for all tested hypotheses including the tables reported in the results section.

**Table: Hypothesis 1**

The intention to pursue exploitation and task performance can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	5,00
	Mode	4	4	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	0	1
		4%	0%	3%
Neither agree nor disagree (N)		4	3	2
		9%	8%	7%
Agree (A)		21	22	10
		46%	56%	33%
Strongly agree (SA)		19	13	17
		41%	33%	57%
Total judgements		46	39	30
Do not know (1) or missing (4)		0/1	1/2	0/1

**Table: Hypothesis 2**

A leader can promote exploitation and task performance by influencing the relevant contextual factors that can be changed within their leadership context.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	5,00
	Mode	4	4	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	0
		2%	0%	0%
Neither agree nor disagree (N)		4	1	5
		9%	3%	17%
Agree (A)		25	26	9
		54%	65%	30%
Strongly agree (SA)		15	12	16
		33%	30%	53%
Total judgements		46	40	30
Do not know (2) or missing (3)		1/1	1/1	0/1

**Table: Hypothesis 3**

The intention to pursue exploration and adaptive performance can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	5,00
	Mode	4	4	5
	IQR	1,00	1,00	0,50
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	1	0
		2%	3%	0%
Neither agree nor disagree (N)		2	1	1
		4%	3%	3%
Agree (A)		24	22	9
		52%	55%	30%
Strongly agree (SA)		19	15	20
		41%	38%	67%
Total judgements		46	40	30
Do not know (1) or missing (3)		0/1	1/1	0/1

**Table: Hypothesis 4**

A leader can promote exploration and adaptive performance by influencing the relevant contextual factors that are possible to change within their leadership context.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	4,00
	Mode	4	4	4
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		0	2	0
		0%	5%	0%
Neither agree nor disagree (N)		1	0	3
		2%	0%	10%
Agree (A)		26	24	14
		57%	60%	47%
Strongly agree (SA)		19	14	13
		41%	35%	43%
Total judgements		46	40	30
Do not know or missing (3)		0/1	0/1	0/1

**Table: Hypothesis 5**

The intention to pursue human capital quality and contextual performance can influence the choice of leadership behaviour.	Round 1			
		Lea	HR	Aca
Median	4,00	4,00	5,00	
Mode	4	4	5	
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		3	1	0
		7%	3%	0%
Neither agree nor disagree (N)		2	3	3
		4%	8%	10%
Agree (A)		21	18	10
		46%	45%	33%
Strongly agree (SA)		19	17	17
		41%	43%	57%
Total judgements		46	40	30
Do not know (2) or missing (3)		1/1	1/1	0/1

**Table: Hypothesis 6**

A leader can promote human capital quality and contextual performance by influencing the relevant contextual factors that are possible to change within their leadership context.	Round 1			
		Lea	HR	Aca
Median	4,00	4,00	5,00	
Mode	4	4	5	
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	0
		2%	0%	0%
Neither agree nor disagree (N)		4	3	3
		9%	8%	10%
Agree (A)		22	20	10
		48%	50%	33%
Strongly agree (SA)		19	16	17
		41%	40%	57%
Total judgements		46	40	30
Do not know (1) or missing (3)		0/1	1/1	0/1



**Table: Hypothesis 7**

Physical distance can influence the choice of leadership behaviour.	Round 1			
		Lea	HR	Aca
Median	5,00	4,00	4,00	
Mode	5	4	4	
IQR	1,00	1,00	0,00	
Strongly disagree (SD)	Count	0	1	0
		0%	2%	0%
Disagree (D)		3	3	1
		6%	7%	3%
Neither agree nor disagree (N)		0	0	2
		0%	0%	6%
Agree (A)		18	24	20
		38%	59%	65%
Strongly agree (SA)		26	13	8
		55%	32%	26%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 8**

Physical distance can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
Median	4,00	4,00	4,00	
Mode	4	4	4	
IQR	1,00	1,00	0,00	
Strongly disagree (SD)	Count	0	1	0
		0%	2%	0%
Disagree (D)		2	3	1
		4%	7%	3%
Neither agree nor disagree (N)		4	1	4
		9%	2%	13%
Agree (A)		27	25	21
		57%	61%	68%
Strongly agree (SA)		14	11	5
		30%	27%	16%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 9**

Risk intensity can influence the choice of leadership behaviour.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	4,00
Mode	5	4	4
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	0 0%	1 2%	0 0%
Neither agree nor disagree (N)	1 2%	0 0%	1 3%
Agree (A)	17 36%	21 51%	16 52%
Strongly agree (SA)	29 62%	19 46%	14 45%
Total judgements	47	41	31
Do not know or missing	0	0	0

**Table: Hypothesis 10**

Risk intensity can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	4,00	4,00	4,00
Mode	4	4	4
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	2 4%	0 0%	0 0%
Neither agree nor disagree (N)	1 2%	5 12%	2 7%
Agree (A)	22 48%	18 44%	15 50%
Strongly agree (SA)	21 46%	18 44%	13 43%
Total judgements	46	41	30
Do not know or missing (2)	0/1	0	0/1

**Table: Hypothesis 11**

External complexity can influence the choice of leadership behaviour.		Round 1			
		Lea	HR	Aca	
		Median	4,00	4,00	4,00
		Mode	4	4	4
IQR	1,00	1,00	1,00		
Strongly disagree (SD)	Count	0	0	0	
		0%	0%	0%	
Disagree (D)		5	3	3	
		11%	7%	10%	
Neither agree nor disagree (N)		1	2	1	
		2%	5%	3%	
Agree (A)		23	24	16	
		49%	59%	52%	
Strongly agree (SA)		18	12	11	
		38%	29%	35%	
Total judgements		47	41	31	
Do not know or missing		0	0	0	

**Table: Hypothesis 12 (Table 57 in the results section).**

External complexity can help or hinder either leadership or employee work performance.		Round 1			Round 2			
		Lea	HR	Aca	Lea	HR	Aca	
		Median	4,00	4,00	4,00	4,00	4,00	4,00
		Mode	4	4	4	4	4	5
IQR	1,00	1,00	1,50	1,00	1,00	1,00		
Strongly disagree (SD)	Count	0	0	1	0	0	0	
		0%	0%	3%	0%	0%	0%	
Disagree (D)		3	3	3	3	0	2	
		6%	7%	10%	7%	0%	7%	
Neither agree nor disagree (N)		4	1	1	3	0	3	
		9%	2%	3%	7%	0%	10%	
Agree (A)		26	22	17	22	20	10	
		55%	54%	55%	51%	54%	35%	
Strongly agree (SA)		14	13	9	15	17	14	
		30%	32%	29%	35%	46%	48%	
Total judgements		47	41	31	43	37	29	
Do not know (2) or missing		0	2/0	0	0/0	0	0	

**Table: Hypothesis 13**

External dynamism can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	4,00
	Mode	4	4	4
	IQR	1,00	0,00	1,00
Strongly disagree (SD)	Count	0	0	1
		0%	0%	3%
Disagree (D)		2	2	1
		4%	5%	3%
Neither agree nor disagree (N)		3	4	1
		6%	10%	3%
Agree (A)		26	27	16
		55%	66%	52%
Strongly agree (SA)		16	8	12
		34%	20%	39%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 14 (Table 58 in the results section).**

External dynamism can help or hinder either leadership or employee work performance.		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	5
	IQR	1,25	0,00	1,00	1,00	0,50	1,00
Strongly disagree (SD)	Count	0	0	1	0	0	1
		0%	0%	3%	0%	0%	3%
Disagree (D)		2	1	2	1	0	1
		4%	2%	6%	2%	0%	4%
Neither agree nor disagree (N)		8	4	2	5	2	2
		17%	10%	6%	12%	6%	7%
Agree (A)		24	28	14	26	26	11
		51%	68%	45%	60%	70%	38%
Strongly agree (SA)		13	8	12	11	9	14
		28%	20%	39%	26%	24%	48%
Total judgements		47	41	31	43	37	29
Do not know or missing		0	0	0	0	0	0

**Table: Hypothesis 15 (Table 60 in the results section).**

The hierarchical level can influence the choice of leadership behaviour.	Round 1			Round 2			
	Lea	HR	Aca	Lea	HR	Aca	
Median	4,00	4,00	4,00	4,00	4,00	4,00	
Mode	5	4	5	5	4	5	
IQR	1,25	1,25	1,00	1,00	1,00	1,00	
Strongly disagree (SD)	Count	1	1	2	1	1	1
		2%	2%	7%	2%	3%	3%
Disagree (D)		6	5	0	3	0	0
		13%	12%	0%	7%	0%	0%
Neither agree nor disagree (N)		4	6	3	3	4	3
		9%	15%	10%	7%	10%	11%
Agree (A)		13	15	12	16	21	11
		28%	37%	40%	37%	57%	38%
Strongly agree (SA)		23	14	13	20	11	14
		49%	34%	43%	47%	30%	48%
Total judgements		47	41	30	43	37	29
Do not know or missing (1)		0	0	0/1	0	0	0

**Table: Hypothesis 16 (Table 61 in the results section).**

Hierarchical level can help or hinder either leadership or employee work performance.	Round 1			Round 2			
	Lea	HR	Aca	Lea	HR	Aca	
Median	4,00	4,00	4,00	4,00	4,00	4,00	
Mode	4	4	4	4	4	4	
IQR	1,25	1,50	2,00	1,00	1,50	1,00	
Strongly disagree (SD)	Count	1	1	1	0	1	0
		2%	2%	3%	0%	3%	0%
Disagree (D)		5	3	0	1	1	0
		11%	7%	0%	2%	3%	0%
Neither agree nor disagree (N)		5	8	6	2	8	3
		11%	20%	21%	5%	21%	10%
Agree (A)		18	18	11	23	18	17
		38%	44%	38%	53%	49%	59%
Strongly agree (SA)		18	10	11	17	9	9
		38%	24%	38%	40%	24%	31%
Total judgements		47	41	29	43	37	29
Do not know (1) or missing (2)		0	1/0	0/2	0	0	0

**Table: Hypothesis 17**

Centralisation can influence the choice of leadership behaviour.	Round 1			
		Lea	HR	Aca
	Median	5,00	4,00	5,00
	Mode	5	4	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	0
		2%	0%	0%
Disagree (D)		1	3	2
		2%	7%	6%
Neither agree nor disagree (N)		2	1	1
		4%	2%	3%
Agree (A)		12	20	11
		26%	49%	35%
Strongly agree (SA)		31	17	17
		66%	41%	55%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 18**

Centralisation can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
	Median	5,00	4,00	5,00
	Mode	5	4	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	1	1
		4%	2%	3%
Neither agree nor disagree (N)		3	3	3
		6%	7%	10%
Agree (A)		15	22	11
		32%	54%	35%
Strongly agree (SA)		26	15	16
		55%	37%	52%
Total judgements		47	41	31
Do not know		1		

**Table: Hypothesis 19 (Table 62 in the results section).**

A leader can increase or decrease centralisation in their leadership context within the limitations given by the organisational and external context.	Round 1			Round 2	
	Lea	HR	Aca	Lea	Aca
Median	4,00	4,00	4,00	4,00	4,00
Mode	4	4	4	4	4
IQR	2,00	1,00	1,50	1,00	0,00
Strongly disagree (SD)	Count 2%	1 0%	0 0%	0 0%	0 0%
Disagree (D)	4 9%	1 3%	3 12%	3 7%	1 3%
Neither agree nor disagree (N)	6 13%	3 8%	5 19%	3 7%	4 14%
Agree (A)	19 41%	20 50%	12 46%	20 47%	18 62%
Strongly agree (SA)	15 33%	14 35%	5 19%	16 37%	5 17%
Total judgements	46	40	26	42	28
Do not know (4) or missing (5)	1/1	2/0	1/4	1/0	1/0

**Table: Hypothesis 20**

Formalisation can influence the choice of leadership behaviour.	Round 1		
	Lea	HR	Aca
Median	4,00	4,00	4,00
Mode	4	4	4
IQR	0,00	0,00	1,00
Strongly disagree (SD)	Count 2%	1 0%	0 0%
Disagree (D)	3 7%	1 2%	3 10%
Neither agree nor disagree (N)	4 9%	6 15%	3 10%
Agree (A)	28 61%	27 66%	17 55%
Strongly agree (SA)	10 22%	7 17%	8 26%
Total judgements	46	41	31
Do not know or missing (1)	0/1	0	0

**Table: Hypothesis 21**

Formalisation can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	4,00	4,00	4,00
Mode	4	4	4
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0
		2%	0%
Disagree (D)		4	0
		9%	0%
Neither agree nor disagree (N)		5	4
		11%	10%
Agree (A)		24	25
		51%	63%
Strongly agree (SA)		13	11
		28%	28%
Total judgements	47	40	30
Do not know or missing (2)	0	0/1	0/1

**Table: Hypothesis 22**

A leader can increase or decrease formalisation in their leadership context within the limitations given by the organisational and external context	Round 1		
	Lea	HR	Aca
Median	4,00	4,00	4,00
Mode	4	4	4
IQR	0,00	1,00	0,50
Strongly disagree (SD)	Count	0	0
		0%	0%
Disagree (D)		4	2
		9%	5%
Neither agree nor disagree (N)		6	8
		13%	20%
Agree (A)		28	25
		60%	61%
Strongly agree (SA)		9	6
		19%	15%
Total judgements	47	41	28
Do not know or missing (3)	0	0	0/3



**Table: Hypothesis 23 (Table 63 in the results section).**

Internal complexity can influence the choice of leadership behaviour.		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	4,00	4,00	4,00	4,00
	Mode	4	5	4	4
	IQR	1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	1	0	0	0
		2%	0%	0%	0%
Disagree (D)		2	3	1	1
		4%	7%	3%	3%
Neither agree nor disagree (N)		1	6	4	2
		2%	15%	13%	5%
Agree (A)		25	15	14	21
		53%	37%	45%	57%
Strongly agree (SA)		18	17	12	13
		38%	41%	39%	35%
Total judgements		47	41	31	37
Do not know or missing		0	0	0	0

**Table: Hypothesis 24**

Internal complexity can help or hinder either leadership or employee work performance.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	4,00
	Mode	4	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		3	1	1
		6%	2%	3%
Neither agree nor disagree (N)		3	4	3
		6%	10%	10%
Agree (A)		22	17	12
		47%	41%	39%
Strongly agree (SA)		19	19	15
		40%	46%	48%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 25 (Table 64 in the results section).**

A leader can increase or decrease internal complexity in their leadership context within the limitations given by the organisational and external context		Round 1			Round 2	
		Lea	HR	Aca	Lea	HR
	Median	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4
	IQR	1,25	1,00	1,00	1,00	0,00
Strongly disagree (SD)	Count	0	0	0	0	0
		0%	0%	0%	0%	0%
Disagree (D)		4	4	2	2	0
		9%	10%	6%	5%	0%
Neither agree nor disagree (N)		10	9	3	4	8
		21%	22%	10%	9%	22%
Agree (A)		23	20	16	26	22
		49%	49%	52%	60%	59%
Strongly agree (SA)		10	8	10	11	7
		21%	20%	32%	26%	19%
Total judgements		47	41	31	43	37
Do not know or missing		0	0	0	0	0

**Table: Hypothesis 26**

Interdependence can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	4,00
	Mode	5	4	4
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	0
		2%	0%	0%
Disagree (D)		4	2	2
		9%	5%	6%
Neither agree nor disagree (N)		1	2	0
		2%	5%	0%
Agree (A)		17	22	18
		37%	54%	58%
Strongly agree (SA)		22	15	10
		48%	37%	32%
Total judgements		46	41	31
Do not know (1) or missing (1)		1/1	0	0

**Table: Hypothesis 27**

Interdependence can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	4,00	4,00	4,00
Mode	5	4	4
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	1 2%	2 5%	1 3%
Neither agree nor disagree (N)	6 13%	0 0%	2 6%
Agree (A)	17 37%	21 51%	17 55%
Strongly agree (SA)	21 46%	18 44%	10 32%
Total judgements	46	41	31
Do not know (1) or missing (1)	1/1	0	0

**Table: Hypothesis 28 (Table 65 in the results section).**

A leader can increase or decrease interdependence in their leadership context within the limitations given by the organisational and external context	Round 1			Round 2		
	Lea	HR	Aca	Lea	HR	Aca
Median	4,00	4,00	4,00	4,00	4,00	4,00
Mode	4	4	4	4	4	4
IQR	1,00	1,25	2,00	0,00	0,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	1 3%	0 0%	0 0%	1 3%
Disagree (D)	4 9%	6 15%	2 6%	4 9%	1 3%	1 4%
Neither agree nor disagree (N)	8 17%	6 15%	4 13%	3 7%	7 19%	0 0%
Agree (A)	24 52%	19 46%	14 45%	28 65%	23 62%	19 65%
Strongly agree (SA)	9 20%	6 15%	9 29%	7 16%	6 16%	8 28%
Total judgements	46	41	31	42	37	29
Do not know (6) or missing (1)	1/1	4/0	1/0	1/0	0	0

**Table: Hypothesis 29**

Resource constraints can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	5,00	4,00	4,00
	Mode	5	4	4
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	1
		2%	0%	3%
Disagree (D)		5	4	2
		11%	10%	6%
Neither agree nor disagree (N)		1	1	3
		2%	3%	10%
Agree (A)		12	21	13
		26%	53%	42%
Strongly agree (SA)		27	14	12
		59%	35%	39%
Total judgements		46	40	31
Do not know or missing (2)		0/1	0/1	0

**Table: Hypothesis 30**

Resource constraints can help or hinder either leadership or employee work performance.		Round 1		
		Lea	HR	Aca
	Median	5,00	5,00	4,00
	Mode	5	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	2	2
		2%	5%	6%
Neither agree nor disagree (N)		1	1	2
		2%	2%	6%
Agree (A)		19	13	13
		41%	32%	42%
Strongly agree (SA)		25	25	14
		54%	61%	45%
Total judgements		46	41	31
Do not know or missing (1)		0/1	0	0

**Table: Hypothesis 31 (Table 66 in the results section).**

A leader can increase or decrease resource constraints in their leadership context within the limitations given by the organisational and external context	Round 1			Round 2		
	Lea	HR	Aca	Lea	HR	Aca
Median	4,00	4,00	4,00	4,00	4,00	4,00
Mode	4	4	4	4	4	4
IQR	1,25	1,25	2,00	1,00	0,50	0,50
Strongly disagree (SD)	Count 0 0%	0 0%	1 3%	0 0%	0 0%	1 3%
Disagree (D)	7 15%	2 5%	4 13%	4 9%	2 5%	1 4%
Neither agree nor disagree (N)	8 17%	7 18%	5 16%	3 7%	7 19%	3 10%
Agree (A)	17 37%	18 45%	12 39%	24 56%	20 54%	17 59%
Strongly agree (SA)	14 30%	9 23%	9 29%	12 28%	8 22%	7 24%
Total judgements	46	40	31	43	37	29
Do not know (4) or missing (2)	0/1	4/1	0	0	0	0

**Table: Hypothesis 34**

The climate for exploitative learning can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	5,00	5,00	5,00
Mode	5	5	5
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	1 2%	1 2%	0 0%
Neither agree nor disagree (N)	2 4%	2 5%	3 10%
Agree (A)	9 19%	15 37%	10 33%
Strongly agree (SA)	35 74%	22 54%	17 57%
Total judgements	47	41	30
Do not know (1) or missing (1)	0	1/0	0/1

**Table: Hypothesis 35**

The climate for exploitative learning can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	5,00	5,00
Mode	5	5	5
IQR	0,00	1,00	0,50
Strongly disagree (SD)	Count	0	0
		0%	0%
Disagree (D)		0	0
		0%	0%
Neither agree nor disagree (N)		1	0
		2%	0%
Agree (A)		8	11
		17%	27%
Strongly agree (SA)		38	30
		81%	73%
Total judgements	47	41	31
Do not know or missing	0	0	0

**Table: Hypothesis 36**

The climate for explorative learning can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	5,00
Mode	5	4	5
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0
		0%	0%
Disagree (D)		0	2
		0%	5%
Neither agree nor disagree (N)		3	2
		6%	5%
Agree (A)		15	20
		32%	49%
Strongly agree (SA)		29	17
		62%	41%
Total judgements	47	41	31
Do not know or missing	0	0	0

**Table: Hypothesis 37**

The climate for explorative learning can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	5,00
Mode	5	4	5
IQR	1,00	1,00	0,50
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	0 0%	0 0%	0 0%
Neither agree nor disagree (N)	1 2%	1 2%	0 0%
Agree (A)	15 32%	20 49%	9 29%
Strongly agree (SA)	31 66%	20 49%	22 71%
Total judgements	47	41	31
Do not know or missing	0	0	0

**Table: Hypothesis 38**

The climate for change can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	4,00	5,00	5,00
Mode	4	5	5
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	2 4%	1 2%	0 0%
Neither agree nor disagree (N)	1 2%	2 5%	1 3%
Agree (A)	23 49%	17 41%	9 29%
Strongly agree (SA)	21 45%	21 51%	21 68%
Total judgements	47	41	31
Do not know or missing	0	0	0

**Table: Hypothesis 39**

The climate for change can be strengthened through leadership interventions.	Round 1			
		Lea	HR	Aca
	Median	5,00	5,00	5,00
	Mode	5	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	0	0
		4%	0%	0%
Neither agree nor disagree (N)		1	1	3
		2%	2%	10%
Agree (A)		17	15	11
		36%	37%	35%
Strongly agree (SA)		27	25	17
		57%	61%	55%
Total judgements		47	41	31
Do not know or missing		0	0	0

**Table: Hypothesis 40**

The climate for diligence and discipline can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
	Median	5,00	5,00	5,00
	Mode	5	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	0
		2%	0%	0%
Disagree (D)		0	2	1
		0%	5%	3%
Neither agree nor disagree (N)		0	2	1
		0%	5%	3%
Agree (A)		19	16	12
		40%	39%	40%
Strongly agree (SA)		26	21	16
		55%	51%	53%
Total judgements		47	41	30
Do not know (1) or missing		1/0	0	0



**Table: Hypothesis 41**

The climate for diligence and discipline can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	5,00
Mode	5	5	5
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 2%	1 0%	0 0%
Disagree (D)	0 0%	1 2%	0 0%
Neither agree nor disagree (N)	0 0%	2 5%	2 7%
Agree (A)	14 30%	18 44%	9 30%
Strongly agree (SA)	31 66%	20 49%	19 63%
Total judgements	47	41	30
Do not know (1) or missing	1/0	0	0

**Table: Hypothesis 42**

The climate for goal-path clarity and stretch can help or hinder either leadership or employee work performance.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	4,00
Mode	5	5	4
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count 0%	0 0%	0 0%
Disagree (D)	2 4%	2 5%	1 3%
Neither agree nor disagree (N)	0 0%	6 15%	4 13%
Agree (A)	16 34%	14 34%	14 47%
Strongly agree (SA)	29 62%	19 46%	11 37%
Total judgements	47	41	30
Do not know or missing (1)	0	0	0/1

**Table: Hypothesis 43**

The climate for goal-path clarity and stretch can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	4,00	5,00
Mode	5	5	5
IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0
		0%	0%
Disagree (D)		1	1
		2%	2%
Neither agree nor disagree (N)		1	6
		2%	15%
Agree (A)		14	15
		30%	37%
Strongly agree (SA)		31	19
		66%	46%
Total judgements	47	41	30
Do not know or missing (1)	0	0	0/1

**Table: Hypothesis 44 (Table 70 in the results section).**

The climate for service can help or hinder either leadership or employee work performance.	Round 1			Round 2
	Lea	HR	Aca	HR
Median	5,00	4,00	5,00	4,00
Mode	5	4	5	4
IQR	1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	1	0
		4%	2%	0%
Neither agree nor disagree (N)		4	6	3
		9%	15%	10%
Agree (A)		13	21	11
		28%	51%	37%
Strongly agree (SA)		28	11	16
		60%	27%	53%
Total judgements	47	41	30	36
Do not know (2) or missing (1)	0	2/0	0/1	1/0

**Table: Hypothesis 45 (Table 71 in the results section).**

The climate for service can be strengthened through leadership interventions.		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	5,00	4,00	5,00	4,00
	Mode	5	5	5	5
	IQR	1,00	1,00	0,50	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		1	1	0	1
		2%	2%	0%	3%
Neither agree nor disagree (N)		2	5	2	2
		4%	12%	7%	5%
Agree (A)		13	16	8	16
		28%	39%	27%	43%
Strongly agree (SA)		31	18	20	18
		66%	44%	67%	49%
Total judgements		47	41	30	37
Do not know (1) or missing (1)		0	1/0	0/1	0

**Table: Hypothesis 46**

The climate for collaboration can help or hinder either leadership or employee work performance.		Round 1		
		Lea	HR	Aca
	Median	5,00	5,00	5,00
	Mode	5	5	5
	IQR	0,25	1,00	0,50
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		0	1	0
		0%	2%	0%
Neither agree nor disagree (N)		2	0	1
		4%	0%	3%
Agree (A)		7	13	7
		15%	32%	23%
Strongly agree (SA)		38	27	22
		81%	66%	73%
Total judgements		47	41	30
Do not know or missing (1)		0	0	0/1

**Table: Hypothesis 47**

The climate for collaboration can be strengthened through leadership interventions.	Round 1			
		Lea	HR	Aca
	Median	5,00	5,00	5,00
	Mode	5	5	5
IQR	1,00	1,00	0,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	1
		2%	0%	3%
Neither agree nor disagree (N)		2	1	0
		4%	3%	0%
Agree (A)		11	13	5
		23%	33%	17%
Strongly agree (SA)		33	26	24
		70%	65%	80%
Total judgements		47	40	30
Do not know or missing (2)		0	0/1	0/1

**Table: Hypothesis 48**

The climate for productive discussions can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
	Median	5,00	5,00	5,00
	Mode	5	5	5
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		0	0	0
		0%	0%	0%
Neither agree nor disagree (N)		2	2	2
		4%	5%	7%
Agree (A)		15	16	10
		32%	39%	33%
Strongly agree (SA)		30	23	18
		64%	56%	60%
Total judgements		47	41	30
Do not know or missing (1)		0	0	0/1

**Table: Hypothesis 49**

The climate for productive discussions can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	5,00	5,00
Mode	5	5	5
IQR	1,00	1,00	0,00
Strongly disagree (SD)	Count	0	0
		0%	0%
Disagree (D)		1	2
		2%	5%
Neither agree nor disagree (N)		2	2
		4%	5%
Agree (A)		17	12
		36%	29%
Strongly agree (SA)		27	25
		57%	61%
Total judgements	47	41	30
Do not know or missing (1)	0	0	0/1

**Table: Hypothesis 50 (Table 73 in the results section).**

The climate for fairness and justice can help or hinder either leadership or employee work performance.	Round 1			Round 2
	Lea	HR	Aca	HR
Median	5,00	4,00	5,00	5,00
Mode	5	5	5	5
IQR	1,00	1,25	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	2	1
		4%	5%	3%
Neither agree nor disagree (N)		2	7	2
		4%	17%	7%
Agree (A)		18	12	9
		38%	29%	30%
Strongly agree (SA)		25	20	18
		53%	49%	60%
Total judgements	47	41	30	37
Do not know or missing (1)	0	0	0/1	0

**Table: Hypothesis 51 (Table 74 in the results section).**

The climate for fairness and justice can be strengthened through leadership interventions.		Round 1			Round 2
		Lea	HR	Aca	HR
	Median	5,00	4,00	5,00	4,00
	Mode	5	4	5	5
	IQR	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		3	0	1	0
		7%	0%	3%	0%
Neither agree nor disagree (N)		2	5	1	3
		4%	12%	3%	8%
Agree (A)		14	20	8	16
		30%	49%	27%	43%
Strongly agree (SA)		27	16	20	18
		59%	39%	67%	49%
Total judgements		46	41	30	37
Do not know or missing (2)		0/1	0	0/1	0

**Table: Hypothesis 52 (Table 75 in the results section).**

The climate for empowerment can help or hinder either leadership or work performance.		Round 1			Round 2
		Lea	HR	Aca	Lea
	Median	4,00	4,00	4,00	5,00
	Mode	5	5	5	5
	IQR	2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		2	2	0	1
		4%	5%	0%	2%
Neither agree nor disagree (N)		8	3	3	0
		17%	7%	10%	0%
Agree (A)		15	17	13	20
		32%	41%	43%	47%
Strongly agree (SA)		20	19	14	22
		43%	46%	47%	51%
Total judgements		47	41	30	43
Do not know (2) or missing		2/0	0	0	0

**Table: Hypothesis 53 (Table 76 in the results section).**

The climate for empowerment can be strengthened through leadership interventions.		Round 1			Round 2
		Lea	HR	Aca	Lea
	Median	4,00	5,00	5,00	5,00
	Mode	5	5	5	5
	IQR	2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0
		0%	0%	0%	0%
Disagree (D)		2	1	0	1
		4%	2%	0%	2%
Neither agree nor disagree (N)		7	5	3	0
		15%	12%	10%	0%
Agree (A)		17	13	10	20
		36%	32%	33%	47%
Strongly agree (SA)		18	22	17	22
		38%	54%	57%	51%
Total judgements		47	41	30	43
Do not know (3) or missing		3/0	0	0	0

**Table: Hypothesis 54 (Table 78 in the results section).**

The climate for safety can help or hinder either leadership or employee work performance.		Round 1			Round 2
		Lea	HR	Aca	Lea
	Median	4,00	4,00	4,00	4,00
	Mode	4	5	4	4
	IQR	2,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	1	0	0	0
		2%	0%	0%	0%
Disagree (D)		4	1	0	0
		9%	2%	0%	0%
Neither agree nor disagree (N)		4	5	2	0
		9%	12%	7%	0%
Agree (A)		22	16	15	23
		47%	39%	50%	53%
Strongly agree (SA)		15	19	13	20
		32%	46%	43%	47%
Total judgements		47	41	30	43
Do not know (1) or missing		1/0	0	0	0

**Table: Hypothesis 55**

The climate for safety can be strengthened through leadership interventions.	Round 1			
		Lea	HR	Aca
Median	4,00	4,00	4,00	
Mode	4	5	4	
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	0
		2%	0%	0%
Neither agree nor disagree (N)		4	4	1
		9%	10%	3%
Agree (A)		25	17	13
		53%	41%	43%
Strongly agree (SA)		17	20	16
		36%	49%	53%
Total judgements		47	41	30
Do not know or missing (1)		0	0	0/1

**Table: Hypothesis 56**

The climate for ethical conduct can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
Median	4,00	5,00	5,00	
Mode	5	5	5	
IQR	1	1	0,5	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		4	2	0
		9%	5%	0%
Neither agree nor disagree (N)		4	3	2
		9%	7%	7%
Agree (A)		16	12	9
		35%	29%	30%
Strongly agree (SA)		22	23	19
		48%	56%	63%
Total judgements		46	41	30
Do not know (1) or missing (2)		0/1	1/0	0/1



**Table: Hypothesis 57**

The climate for ethical conduct can be strengthened through leadership interventions.	Round 1		
	Lea	HR	Aca
Median	5,00	5,00	5,00
Mode	5	5	5
IQR	1,00	1,00	0,50
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%
Disagree (D)	1 2%	0 0%	0 0%
Neither agree nor disagree (N)	2 4%	1 2%	1 3%
Agree (A)	16 35%	15 37%	7 23%
Strongly agree (SA)	27 59%	24 59%	21 70%
Total judgements	46	41	30
Do not know (2) or missing (2)	0/1	1/0	1/1

**Table: Hypothesis 58 (Table 79 in the results section).**

The climate for sustainability can help or hinder either leadership or employee work performance.	Round 1			Round 2		
	Lea	HR	Aca	Lea	HR	Aca
Median	3,00	4,00	4,00	4,00	4,00	4,00
Mode	3	4	4	4	4	4
IQR	2,00	1,00	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count 0 0%	0 0%	0 0%	1 2%	0 0%	0 0%
Disagree (D)	9 20%	4 10%	3 10%	5 12%	2 5%	2 7%
Neither agree nor disagree (N)	14 30%	13 33%	5 17%	10 23%	12 32%	3 10%
Agree (A)	13 28%	15 38%	11 37%	17 39%	18 49%	13 45%
Strongly agree (SA)	8 17%	7 18%	11 37%	8 19%	5 14%	11 38%
Total judgements	46	39	30	41	37	29
Do not know (2) or missing (4)	2/1	0/2	0/1	2/0	0	0

**Table: Hypothesis 59 (Table 80 in the results section).**

The climate for sustainability can be strengthened through leadership interventions.	Round 1			Round 2		
		Lea	HR	Aca	Lea	HR
Median	4,00	4,00	5,00	4,00	4,00	5,00
Mode	4	5	5	4	4	5
IQR	2,00	1,25	1,00	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0	0	0
		0%	0%	0%	0%	0%
Disagree (D)	Count	2	1	2	1	1
		4%	3%	7%	2%	3%
Neither agree nor disagree (N)	Count	10	8	1	4	1
		22%	20%	3%	9%	3%
Agree (A)	Count	21	15	10	25	23
		46%	38%	33%	58%	62%
Strongly agree (SA)	Count	12	16	17	12	12
		26%	40%	57%	28%	32%
Total judgements		46	40	30	42	37
Do not know (1) or missing (3)		1/1	0/1	0/1	1/0	0

**Table: Hypothesis 60**

The value composition and diversity among the people the leader leads can influence the choice of leadership behaviour.	Round 1			
		Lea	HR	Aca
Median	4,00	4,00	5,00	
Mode	4	5	5	
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	1	0	0
		2%	0%	0%
Disagree (D)	Count	3	2	3
		6%	5%	10%
Neither agree nor disagree (N)	Count	4	3	4
		9%	8%	13%
Agree (A)	Count	19	17	7
		40%	43%	23%
Strongly agree (SA)	Count	19	18	16
		40%	45%	53%
Total judgements		47	40	30
Do not know (1) or missing		1/0	0	0

**Table: Hypothesis 61**

The value composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.		Round 1			
		Lea	HR	Aca	
		Median	4,00	4,00	5,00
		Mode	4	4	5
IQR	1,00	1,00	1,00		
Strongly disagree (SD)	Count	0	0	0	
		0%	0%	0%	
Disagree (D)		4	2	2	
		9%	5%	7%	
Neither agree nor disagree (N)		3	4	3	
		6%	10%	10%	
Agree (A)		20	20	9	
		43%	50%	31%	
Strongly agree (SA)		19	14	15	
		40%	35%	52%	
Total judgements		47	40	29	
Do not know (1) or missing (3)		1/0	0/1	0/2	

**Table: Hypothesis 62 (Table 82 in the results section).**

A leader can change the value composition and diversity in their leadership context within the limitations given by the organisational and external context.		Round 1			Round 2	
		Lea	HR	Aca	HR	
		Median	4,00	4,00	4,00	4,00
		Mode	4	4	4	4
IQR	1,00	2,00	1,00	0,00		
Strongly disagree (SD)	Count	1	0	0	0	
		2%	0%	0%	0%	
Disagree (D)		3	2	2	1	
		7%	5%	7%	3%	
Neither agree nor disagree (N)		6	6	2	3	
		13%	15%	7%	8%	
Agree (A)		20	19	14	25	
		43%	49%	47%	68%	
Strongly agree (SA)		16	9	12	7	
		35%	23%	40%	19%	
Total judgements		46	39	30	36	
Do not know (3) or missing (4)		0/1	3/2	0/1	1/0	

**Table: Hypothesis 63**

The personality composition and diversity among the people the leader leads can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	5,00	4,00
	Mode	4	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	2	1
		4%	5%	3%
Neither agree nor disagree (N)		2	2	4
		4%	5%	14%
Agree (A)		25	14	11
		54%	35%	38%
Strongly agree (SA)		17	22	13
		37%	55%	45%
Total judgements		46	40	29
Do not know or missing (4)		0/1	0/1	0/2

**Table: Hypothesis 64**

The personality composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.		Round 1		
		Lea	HR	Aca
	Median	4,00	5,00	4,40
	Mode	4	5	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	0
		2%	0%	0%
Neither agree nor disagree (N)		3	3	4
		7%	8%	13%
Agree (A)		24	16	11
		53%	40%	37%
Strongly agree (SA)		17	21	15
		38%	53%	50%
Total judgements		45	40	30
Do not know or missing (4)		0/2	0/1	0/1

**Table: Hypothesis 65 (Table 83 in the results section).**

A leader can change the personality composition and diversity in their leadership context within the limitations given by the organisational and external context.		Round 1			Round 2		
		Lea	HR	Aca	Lea	HR	Aca
	Median	4,00	4,00	4,00	4,00	4,00	4,00
	Mode	4	4	4	4	4	4
	IQR	1,00	1,25	2,00	0,00	1,00	1,50
Strongly disagree (SD)	Count	1	1	1	0	0	1
		2%	3%	3%	0%	0%	3%
Disagree (D)		4	6	1	2	3	1
		9%	15%	3%	5%	8%	4%
Neither agree nor disagree (N)		12	9	7	5	12	4
		26%	23%	23%	11%	32%	14%
Agree (A)		22	13	10	28	17	12
		48%	33%	33%	65%	46%	41%
Strongly agree (SA)		7	7	10	8	5	10
		15%	18%	33%	19%	14%	35%
Total judgements		46	39	30	43	37	28
Do not know (4) or missing (4)		0/1	3/2	1/1	0	0	1/0

**Table: Hypothesis 66**

The expertise composition and diversity among the people the leader leads can influence the choice of leadership behaviour.		Round 1		
		Lea	HR	Aca
	Median	4,00	4,00	4,50
	Mode	4	4	5
	IQR	1,00	1,00	1,00
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		2	0	0
		4%	0%	0%
Neither agree nor disagree (N)		5	2	4
		11%	5%	13%
Agree (A)		20	23	11
		44%	58%	37%
Strongly agree (SA)		17	14	15
		38%	35%	50%
Total judgements		45	40	30
Do not know (2) or missing (2)		1/1	1/0	0/1

**Table: Hypothesis 67**

The expertise composition and diversity among the people the leader leads can help or hinder either leadership or employee work performance.	Round 1			
		Lea	HR	Aca
	Median	4,00	4,00	4,50
	Mode	4	4	5
IQR	1,00	1,00	1,00	
Strongly disagree (SD)	Count	0	0	0
		0%	0%	0%
Disagree (D)		1	0	0
		2%	0%	0%
Neither agree nor disagree (N)		6	3	3
		13%	8%	10%
Agree (A)		21	26	12
		47%	65%	40%
Strongly agree (SA)		16	10	15
		36%	25%	50%
Total judgements		45	40	30
Do not know (2) or missing (4)		1/2	1/1	0/1

**Table: Hypothesis 68**

A leader can change the expertise composition and diversity in their leadership context within the limitations given by the organisational and external context.	Round 1			
		Lea	HR	Aca
	Median	4,00	4,00	4,00
	Mode	4	4	4
IQR	0,25	0,25	1,00	
Strongly disagree (SD)	Count	0	1	0
		0%	3%	0%
Disagree (D)		3	0	1
		7%	0%	3%
Neither agree nor disagree (N)		6	4	5
		13%	10%	17%
Agree (A)		25	22	14
		56%	56%	48%
Strongly agree (SA)		10	9	9
		22%	23%	31%
Total judgements		45	39	29
Do not know (4) or missing (6)		1/2	3/2	0/2

..//