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„How does the Covid-19 pandemic impact the relation between leadership and performance, and what leadership styles are most effective to address related challenges?“

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Frederike Müller, B.Sc.

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Contents

List of tables I

Abbreviations III

1. Introduction 1

2. Theoretical Background 3

2.1. Leadership 3

2.1.1. Historical Development and Definition 3

2.1.2. Leadership Style Typology 7

2.1.3. Impact of Leadership Styles on Performance 13

2.2. Covid-19 Pandemic 16

2.2.1. Crisis Definition 16

2.2.2. Specific Challenges due to Covid-19 17

2.3. Leadership, Performance and Crisis 23

2.3.1. Impact Crisis on Leadership and Performance 23

2.3.2. Literature Review: Working Conditions, Virtual Environment, Psychological Distress 25

3. Research Method 40

3.1. Qualitative Content Analysis 40

3.2. Sampling and Setting 45

3.3. Interview Guideline 47

4. Results 48

4.1. Category A: General Leadership Questions 48

4.2. Category B: Crises and Covid-19 51

4.3. Category C: Theoretical Understanding 57

4.4. Category D: Working Conditions 59

4.5. Category E: Virtual Environment 62

4.6. Category F: Psychological Distress 66

5. Discussion 70

6. Conclusion 91

Bibliography IV

Appendix XX

Appendix 1: Interview Guideline (German) XX
Appendix 2: Interview Guideline (English)..... XXII
Appendix 3: Handout Definitions Leadership Styles (German)..... XXIV
Appendix 4: Handout Definitions Leadership Styles (English) XXVI
Appendix 5: Participant Information and Declaration of Consent (German).. XXVIII
Appendix 6: Participant Information and Declaration of Consent (English) XXX
Appendix 7: Content Summary Analysis Transcript R1 XXXI
Appendix 8: Content Summary Analysis Transcript R2 XXXVI
Appendix 9: Content Summary Analysis Transcript R3 XL
Appendix 10: Content Summary Analysis Transcript R4 XLV
Appendix 11: Content Summary Analysis Transcript R5 XLVIII
Appendix 12: Content Summary Analysis Transcript R6 LIV
Appendix 13: Content Summary Analysis Transcript R7 LIX
Appendix 14: Content Summary Analysis Transcript R8 LXIII
Appendix 15: Content Summary Analysis Transcript R9 LXVIII
Appendix 16: Content Summary Analysis Transcript R10 LXXI
Appendix 17: Abstract (English) LXXIII
Appendix 18: Abstract (German)..... LXXIV

List of tables

Table 1 Overview of leadership behaviour dimensions in relation to leadership styles 12
Table 2 Leadership styles and their relation to performance including contextual variables 13
Table 3 Positive effects of varying working conditions 27
Table 4 Negative effects of varying working conditions 27
Table 5 Effective leadership behaviours in the context of varying working conditions. 28
Table 6 Challenging effects of a virtual work environment 30
Table 7 Effective leadership styles in the context of virtuality 34
Table 8 Effective leadership behaviours in the context of virtuality 34
Table 9 Effects of psychological well-being variables 36
Table 10 Impact leadership style in the context of psychological distress 39
Table 11 Effective leadership styles in the context of well-being variables 39
Table 12 Developed category system 42
Table 13 Anchor samples and coding rules 43
Table 14 Number of employees supervised by respondents 48
Table 15 Leadership styles mentioned by respondents 49
Table 16 Leadership behaviours mentioned by respondents 49
Table 17 Reported changes due to the pandemic 53
Table 18 Implemented measures due to the pandemic 54
Table 19 Changed working conditions, virtual environment and psychological distress as challenges created by the pandemic 56
Table 20 Impact of changed working conditions on working situation 60
Table 21 Leadership style adaptation in the context of changed working conditions 61
Table 22 Impact leadership on performance in the context of changed working conditions 62
Table 23 Impact virtual environment on working situation 64
Table 24 Leadership style adaptation in the context of virtual environment 65
Table 25 Impact leadership on performance in the context of virtual environment 66
Table 26 Impact of psychological distress on working situation 67
Table 27 Leadership style adaptation in the context of psychological distress 68
Table 28 Impact leadership on performance in the context of psychological distress ... 69

Table 29 Leadership behaviours, assignable dimensions and associated leadership styles 71
Table 30 Leadership behaviours, assignable dimensions and associated leadership styles regarding performance 73
Table 31 Linking results from literature review to results from category D2 and D3 81
Table 32 Comparing leadership adaptations in the context of changed working conditions (D2) to leadership style dimensions 82
Table 33 Comparing leadership behaviours that are positively related to performance in the context of changed working conditions (D3) to leadership style dimensions 82
Table 34 Comparing leadership adaptations in the context of a virtual environment (E2) to leadership style dimensions 86
Table 35 Comparing leadership behaviours that are positively related to performance in the context of changed a virtual environment (E3) to leadership style dimensions 86
Table 36 Comparing leadership style adaptations in the context of psychological distress (F2) to leadership style dimensions 89
Table 37 Comparing leadership behaviours that are positively related to performance in the context of psychological distress (F3) to leadership style dimensions 89

Abbreviations

W.C	Working Conditions
V.E	Virtual Environment
P.D	Psychological Distress
DIHK	Deutsche Industrie- und Handelskammer
ELS	Ethical Leadership Scale
ELQ	Empowering Leadership Questionnaire

1. Introduction

The Covid-19 pandemic represents an unprecedented crisis for living generations. Since the spring of 2020, life has changed drastically around the world. Measures that were previously unthinkable, such as curfews, were part of everyday life for months. Even at the present time, it is not possible to predict when the pandemic will end.

The pandemic has had a vehement impact on, not only people's private sphere, but also their everyday working lives. The challenges are manifold; therefore, this thesis attempts to take into account different changes and influencing factors as broadly as possible, while analysing the handling and direct impact as concretely as possible.

Hence, three different challenges are derived that were created by the pandemic situation and impact leadership and performance and their relationship. This includes for one, changed working conditions such as varying working hours due to for instance short-time work and homeschooling. Secondly, the virtual work environment and its implications are analysed separately, as this challenge considerably impacts central aspects such as coordination and communication. Lastly, the increased psychological distress created by the Covid-19 crisis, which stems from, for example, fears, worries and isolation, is incorporated.

The economic situation is tense for many companies, which makes stable employee performance all the more important. Leadership is and remains a central research topic. The underlying assumption is that leadership can be adapted to conditions and challenges specific to the situation. Since the influence relationship between leadership and performance is already well researched, it can be deducted that effective leadership and a thoughtful approach to current challenges can have a lasting influence on employee outcomes. The question that arises from this is, therefore, which leadership styles can positively influence subordinate performance in the context of crisis-related challenges. Hence, this thesis addresses the following research questions:

1. How does the Covid-19 pandemic impact the relation between leadership and performance?

2. What leadership styles have a positive impact on performance given

a) the challenges related to the changed working conditions caused by Covid-19?

b) the challenges related to the virtual environment caused by Covid-19?

c) the challenges related to the subordinates' psychological well-being during Covid-19?

First, a theoretical framework is established to gain a deeper understanding of the different variables included, in order to create a basis for qualitative research. Hence, historically grown leadership theories are chronologically reviewed, leadership styles are defined and their impact on performance is determined.

Following different definitions of crises are presented to then classify the Covid-19 crisis in definitional terms and derive specific challenges. Afterwards, the impact of previous crises on leadership and performance is reflected upon. The last part of the theoretical chapter analyses leadership and performance and their relation in the context of situational variables similar to the three challenges derived. The theoretical framework and literature review established in this chapter provide the foundation for the qualitative research.

The third chapter contains information about the applied research method. This includes an overview about the qualitative content analysis per se, as well as the specific execution of the process. Moreover, the sampling strategy and the setting of the interviews are explained, before information about the applied interview guideline is given.

Subsequently, the fourth chapter is dedicated to the summary of the results. The structure of this chapter follows the category system, which is explained in chapter 3. For each category the results are presented and related to the presuppositions developed in chapter 2.

The discussion of the results takes place in chapter 5. The findings of this study are compared to the theoretical framework and the literature review of chapter 2, in order to identify matches, discrepancies and new results. In this context, conclusions are drawn again with regard to the developed presuppositions.

Finally, the results are concisely summarized in the conclusion, limitations of the study are discussed, and an outlook on the need for further research is presented.

2. Theoretical Background

2.1. Leadership

2.1.1. Historical Development and Definition

Grasping the essence of leadership has been troubling the scientific community for centuries. Northouse (2018) points out that "scholars and practitioners have attempted to define leadership for more than a century without universal consensus" (p.33). Yet, the continuing scientific analysis and dispute is vital, because leadership occurs in and impacts various aspects of day-to-day life, such as politics, business as well as sports and religion, for example (Silva 2016: 1).

As the concept of leadership is very complex and often confusing, though, it is important to obtain a general and thorough understanding about what leadership entails de facto. This goal shall be achieved by taking a closer look at different historically grown theories and definitions. Thus, this chapter aims at providing a short overview of the historic development of leadership research as well as at presenting different perceptions and definitions that have developed alongside. Reviewing the most prominent leadership theories chronologically is crucial in order to embed the research questions this thesis poses in its theoretical framework and to determine a satisfying definition of the leadership concept. It needs to be noted, in any case, that leadership style theories will be reviewed separately in chapter 2.1.2. as the different styles will be essential for the qualitative research and therefore need to be examined in more detail.

Great Man Theory

The first prominent leadership approach was developed during the industrialization period. In 1841, Thomas Carlyle published a book that became known as the basis of the *Great Man Theory*. Carlyle described leaders as "gifts from God, placed on earth to provide the lightening needed to uplift human existence" (Spector 2016: 250) and declared that "[t]he History of the World […] was the Biography of Great Men" (Carlyle 2013: 30). Other rationalists like Nietzsche and Galton contributed to the *Great Man Theory*, arguing that leaders were born and not made and that the leadership trait was inheritable (Galton: 1865: 157ff.; Vroom & Jago 2007: 18). Carlyle's particularly religious perception of leadership, which Spector (2016) argues is "less a theory than a statement of faith" (p.251) and the fundamental idea that leadership was solely to be found in a few exceptional men, was soon dismissed (Judge

et al. 2002: 765). The assumption that internal dispositional traits constitute leaders, however, persisted and laid the foundation for the *Trait Approach* (Zaccaro 2007: 6; Hoffman et al. 2011: 349).

Trait Approach

Particularly the early research (until the early 1950s) of the *Trait Approach* is considered to be a "heroic model" (Vroom & Jago 2007: 18) too, as advocates of this theory assume leadership to be a personal quality that distinguishes effective from ineffective leaders (Chan & Drasgow 2001; Judge et al. 2002; Avolio 2007; Vroom & Jago 2007). Zaccaro (2007) defines leadership traits as "relatively coherent and integrated patterns of personal characteristics, reflecting a range of individual differences, that foster consistent leadership effectiveness across a variety of group and organizational situations" (p.7).

Such different traits were tested using psychological tests. In the course of this research, subordinates were compared to leaders in general and effective leaders were measured against ineffective leaders to identify differences in terms of their traits (Vroom & Jago 2007: 18). The psychological tests used for the comparison included, for example, aptitude and personality tests measuring, for instance, intelligence as well as traits such as dominance and masculinity. Other traits associated with leader effectiveness, for instance, include perseverance, self-confidence, initiative and energy (Yukl 1989: 260). Even though the first stream of *Trait Approach* research was dismissed due to inter alia an extensive review by Stogdill (1948) who declared insufficient evidence for the theory, the concept gained scholarly interest again in the 1980s (Kenny & Zaccaro 1983; Lord, De Vader & Alliger 1986; Walter & Scheibe 2013).

Behavioural Approach

The *Behavioural Approach* marked a clear distinction from the *Trait Approach* as it shifted the focus away from leaders' traits and personalities and instead emphasized and analysed their actions and activities (Yukl 1989: 257; Badshah 2012: 51; Northouse 2018: 136,146). The foundation for this approach was laid in the 1950s at the Ohio State University and the University of Michigan. The results and findings of this research as well as the studies conducted by Blake and Mouton are considered representative for the *Behavioural Approach* (Vroom & Jago 2007: 19; Northouse 2018: 136).

Essentially, the behaviour of leaders is clustered into two dimensions – the task and relationship behaviour. The task related behaviour (also called initiating structure; production orien-

tation; concern for production) includes actions such as providing structure, organizing, scheduling and defining role responsibilities. The relationship concerning behaviour (also called consideration; employee orientation; concern for people), on the other hand, focuses on establishing and strengthening leader-follower relationships through trust, mutual respect and camaraderie (Vroom & Jago 2007: 19; Northouse 2018: 137). Some scholars criticise the insufficient scholarly evidence between leaders' behaviours and performance effects, with Yukl (1989) even declaring the findings "contradictory and inconclusive" (p.258). Yet, other authors praise the approach for taking "a step in the direction of acknowledging the role of situation or context in leadership" (Vroom & Jago: 2007: 19).

Situational Approach

The authors Vroom and Jago (2007) refer to the first ideas of the *Situational Approach* as an "antithesis" (p.19) of the *Great Man Theory*, given that philosophers like Spencer and Hegel labelled the supposedly great men "as merely puppets of social forces" (Vroom & Jago 2007: 19). What distinguishes the *Situational Approach* from the previously explained theories is the focus on contextual factors including, for instance, the external environment or characteristics of the workforce. Following, two streams of situational research were developed, with one, the *Pure Situational Theory*, considering leadership as a dependent variable and the other investigating the moderating influence of the situation on the relationship between leadership and effectiveness. This second stream of research is also referred to as *Contingency Theories* (Yukl 1989: 261f.; Vroom & Jago 2007: 19f.).

The Pure Situational Theory

This approach assumes that leadership should be considered as a dependent variable and is called *Pure Situational Theory* by the authors Vroom and Jago (2007: 19). A well-known representative of this assumption is the organization theorist Charles Perrow. In his book published in 1970, the author states that structural characteristics determine (in-)effective organizational leadership. In fact, it is argued that "[t]he traits of leaders reflect the mechanisms by which they are selected, and their behavior is constrained by the situations that they face" (Vroom & Jago 2007: 19). The study conducted by Lieberson and O'Connner (1972) supports this theory, providing evidence that the variance in organizational performance is rather explained by factors other than leadership changes. Yet, the scholars Vroom and Jago (2007) claim that "most social scientists interested in leadership have now abandoned the debate between person or situation in favor of a search for a set of concepts that are capable

of dealing both with differences in situations and with differences in leaders" (p.20). Therefore, the concept of *Contingency Theories* is presented below.

Contingency Theories

A variety of different contingency models exist, including *Fiedler's Contingency Model* first published in 1967, House and Mitchell's *Path-Goal Theory* from the mid 70s, Vroom and Yetton's (1973) *Normative Decision-Making Model* and Hersey and Blanchard's *Situational Theory* from 1969 (Vroom & Jago 2007: 20f.). Reviewing and explaining each of these theories in detail would go beyond the scope of this chapter; nonetheless, all these models have the assumption in common that it is not one optimal leadership that leads to effectiveness but rather the idea that a fit or match must be created between "a leader's traits, style, and orientation and follower maturity and situational challenges" (Avolio 2007: 26f.).

Furthermore, scholars differentiate between external and internal contingencies. The external contextual factors, for instance, refer to the strategy, the social context, organizational structure, tasks and culture, while the internal contingencies revolve around the personality of leaders and followers, the motivation or gender, among others (Avolio 2007: 27). The basis of said approaches will be relevant for this thesis as the Covid-19 pandemic will be characterised an external contingency that impacts the relationship between leadership and performance.

Leader-Member Exchange Theory

The last theory that shall be reviewed in this chapter is the *Leader-Member Exchange Theory*. This approach differs from the previously examined theories in that it shifts the focus towards the relationship between leaders and subordinates (Dansereau, Graen & Haga 1975; Graen, Novak & Sommerkamp 1982). The *Leader-Member Exchange Theory*, originally named *Vertical Linkage Dyad,* was first developed in the 1970s and

> "investigates the quality of exchange relationships, or dyads between formally assigned leaders/supervisors and their subordinates, and the consequences of different types of exchange relationships in terms of the attitudes and behaviours of subordinates" (van Breukelen, Schyns & Le Blanc 2006: 297).

The scholars differentiate between high- and low-quality relationships, arguing that leaders have different relations with their respective employees. The actual exchange or transaction process consists of the provision of "positional resources" (Graen, Novak & Sommerkamp 1982: 111), which, for instance, include challenging projects or privileged information in

return for higher commitment in terms of more time or energy provided by the subordinate (Dansereau, Graen & Haga 1975: 50; Graen, Novak & Sommerkamp 1982: 111; van Breukelen, Schyns & Le Blanc 2006: 301). The scholar Hollander (1976) draws upon one of the key assumptions of this theory, namely that leadership is "a two-way influence process […] [that] emphasizes the more dynamic elements in leader-follower relations, including interpersonal perception and the fulfillment of expectancies" (*ibid.*: 7).

Definition Leadership

After reviewing some of the most prominent leadership theories, a definition shall be derived. Each of the theories presented focuses on different aspects of leadership – namely the leader him/herself (*Trait* and *Behavioural Approach*), the situational or contextual circumstances (*Situational Approach* and *Contingency Theory*) and the relationship and interaction process between leaders and followers (*Leader-Member Exchange Theory*). Yet, all these theories have in common that leadership is measured by its effectiveness. With the revised theories in mind, it is important to determine a definition of leadership that accounts for and satisfies the different components of leadership. The author Silva (2016) proposes the following definition: "Leadership is the process of interactive influence that occurs when, in a given context, some people accept someone as their leader to achieve common goals" (p.3). This definition shall serve as the theoretical understanding of leadership for the purpose of this thesis as it incorporates four crucial elements that are: process, influence, context and common goals.

2.1.2. Leadership Style Typology

In this chapter, different leadership styles and their characteristics are discussed. Countless research papers examine the impact of various leadership styles on performance or other outcome variables. However, the authors Gandolfi and Stone (2017) criticise the lack of a definitional clarity regarding the question what a leadership style exactly is. In their paper, three criteria are discussed that are assumed to be the basis of the development of leadership styles, namely: *influence*, *intentionality* and *perception*. It is argued that leadership independent of its specific style always contains an influence process in order to achieve a common goal. The factor *intentionality* refers to the leader's self-awareness and ability to interpret their environment consciously. Lastly, the aspect of perception includes the importance of follower's perspective and how subordinates apprehend the applied leadership (*ibid.*: 21f.). Gandolfi and Stone (2017) therefore propose a leadership style being "[a]n intentional

means by which a leader influences a group of people in an organization to a widely understood future state that is different from the present one" (p.22). Thus, leadership styles refer to the question how leaders intentionally behave in order to influence their subordinates and achieve certain goals.

Various leadership styles have been identified in the last decades, which have often left the wider public confused due to a lack of distinction (Gandolfi & Stone 2017: 25). The scope of this thesis will not allow reviewing every leadership style, but rather present a comprehensive overview of prominent leadership styles that are important in the further course of this thesis. Hence, transformational and transactional leadership is defined firstly, as these two styles often build the basis for additional, more specified leadership styles. A variation of some of the latter will be presented afterwards.

Transformational, Transactional and Laissez-faire Leadership

In leadership research, no other typology has attracted more scholarly attention and research than transformational and transactional leadership (Northouse 2018: 263). This classification dates back to a publication by the author Burns in the late 1970s, who first introduced and discussed the terms in the context of political leadership. In the following years, the scholar Bass refined the concept and continued to adapt it (Bass 1985, 1997; Bass & Avolio 1994). In one of his publications (Bass 1997), the author claims:

> "The paradigm is sufficiently broad to provide a basis for measurement and understanding that is as universal as the concept of leadership itself. Here, universal does not imply constancy of means, variances, and correlations across all situations but rather explanatory constructs good for all situations" (p.130).

This leaves the question what it is that characterises and distinguishes transformational and transactional leadership. First and foremost, transformational leadership intends to create a vision and purpose for subordinates in order to increase their intrinsic motivation (Judge & Piccolo 2004). Bass (1997) describes it as follows: "[t]ransformational leaders motivate followers […] to do more than they originally expected to do as they strive for higher order outcomes" (p.133). Transactional leadership, on the other hand, emphasizes the exchange relationship between leader and subordinate, meaning that "the transactional leader gives followers something they want in exchange for something the leader wants" (Judge & Piccolo 2004: 755).

The concept of transformational leadership consists of four dimensions: *idealized influence*, *inspirational motivation*, *intellectual stimulation* and lastly *individual consideration*. The aspect of *idealized influence* or charisma refers to "the degree to which the leader behaves in admirable ways that cause followers to identify with the leader" (Judge & Piccolo 2004: 755). *Inspirational motivation* is described as the leaders' ability to communicate an appealing vision in a way that provides a purpose for subordinates' tasks. The dimension of *intellectual stimulation* measures the degree to which leaders can stimulate their subordinates to express new ideas as well as challenge existing standards and beliefs. Lastly, *individualized consideration* addresses how well leaders treat their subordinates on an individual level by considering and listening to their needs as well as the degree to which leaders encourage and coach subordinates (Bass 1997: 133). Transformational leadership can thus be considered a wide-ranging leadership style that aims at motivating employees to work beyond the expected while providing them with the necessary tools and attentiveness (Bass 1997; Davis & Bryant 2003; Judge & Piccolo 2004).

The concept of transactional leadership comprises three dimensions. The first called – *contingent reward* – entails that leaders "engage in a constructive path-goal transaction of reward for performance" (Bass 1997: 134). This includes the communication of expectations as well as the allocation of necessary resources for subordinates to successfully perform their work. The second and third dimensions are called *active* and *passive management by exception*. *Active management by exception* refers to leaders' direct involvement in monitoring subordinates' work and, if necessary, intervening, for instance by implementing corrective measures. Contrarily, the *passive management by exception* means that only once deviations have occurred and caused problems, leaders act (Bass 1997; Judge & Piccolo 2004).

The laissez-faire leadership, in comparison, is rather defined by the absence of leadership. This refers to leaders who do not fulfil their responsibilities, which for instance appears when leaders fail to assist and advise subordinates. Additionally, it would be considered laissez-faire leadership if a leader is not available in important situations or refuses to make decisions (Bass 1997: 134; Gandolfi & Stone 2017: 26).

Ethical Leadership

The concept of ethical leadership, as the name reveals, treats the ethical behaviour of leaders, which, in transformational leadership, is considered as ethical role modelling (Bass 1997: 133; Bedi, Alpaslan & Green 2016: 518). Ethical leadership is based on the assumption that individuals keep developing by making their own experiences or learning from the way peo-

ple around them conduct themselves. This implies that if leaders act as role models by showing integrity and fairness, employees themselves are likely to implement similar ethical standards in their behaviour (Brown, Treviño & Harrison 2005; Brown & Treviño 2006; Bedi, Alpaslan & Green 2016).

Lastly, research suggests that "when followers perceive a leader as caring and concerned for their well-being, they feel obliged to reciprocate that leader's support" (Bedi, Alpaslan & Green 2016: 519). The *Ethical Leadership Scale* (ELS) measures the degree of ethical leadership by taking into consideration ten aspects which are: *consideration behaviour, interactional fairness, leader honesty, idealized influence, affective trust, a negative relation to abusive supervision, satisfaction with the leader, perceived leader effectiveness, job dedication* and *followers' willingness to report problems*. The first six aspects directly describe the leader's behaviour while the latter present related outcome criteria (Brown, Treviño & Harrison 2005: 129f.).

Empowering Leadership

The concept of empowering leadership emphasizes on developing employees' self-management skills and abilities. The authors Nguyen et al. (2016) name several criteria such as "participative decision-making, ensuring meaningful work, conveying confidence in subordinates' capacity to achieve results, and personal support" (p.14) to be crucial for empowering leaders. This behaviour shall sustain and enhance the organizational involvement of subordinates by developing necessary skills to act autonomously (Ahearne, Mathieu & Rapp 2005; van Dierendonck & Dijkstra 2012). The authors Arnold et al. (2000) developed the *Empowering Leadership Questionnaire* (ELQ) to measure the degree of empowering leadership. This scale consists of five categories, namely: *coaching*, *informing*, *leading by example*, *showing concern/interacting with the team*, and *participative decision making* (*ibid.*: 254ff.).

Participative and Directive Leadership

The last two leadership styles that shall be included in this overview are directive and participative leadership. The first style is characterised by behaviour that "is aimed at giving clear and detailed directions to followers, structuring tasks and expecting compliance with instructions" (Stoker, Garretsen & Soudis 2019: 200). It thus follows a rather strict top-down hierarchy, in which leaders make the decisions and employees are expected to follow and per-

form without being involved in the decision-making process (Euwema, Wendt & van Emmerik 2007: 1038; Sauer 2011: 575; Arnold & Loughlin 2013: 69).

Participative leadership, on the other hand, is defined by the inclusion of employees regarding decision-making and problem solving. The author Sauer (2011) adds that "a participative style allows team members to determine for themselves how they want to work to accomplish their objectives" (p.575). While directive and participative leadership are often considered as two opposing styles, research indicates that a leader can use both styles in a complementary manner (Somech 2005: 794). Moreover, scholars suggest that transformational leadership can be either directive or participative as well, while transactional leadership can be directive (Arnold & Loughlin 2013: 68).

Stoker, Garretsen and Soudis (2019) use a scale of five categories for the participative and directive leadership style. The categories to measure the degree of directive leadership are based on a scale used by Euwema, Wendt and van Emmerik (2007) and include: *expectations that employees follow instructions precisely as well as immediately*, *close supervision*, *leader makes most decisions*, and *employees must submit comprehensive reports*. The categories of participative leadership meanwhile include *encouragement of employees to participate in the decision-making process, informing employees about organizational topics*, *sharing information and ideas*, *providing freedom for employees to make decision and mistakes without close supervision*, and *asking employees for input when making decisions* (Stoker, Garretsen & Soudis 2019: 212).

The following table provides a short overview about the referenced leadership behaviour dimensions that are used to measure the respective leadership styles. Regarding the ethical leadership style only those categories that refer to the leadership behaviour are included in the table and not the additional outcome criteria mentioned above.

Table 1 Overview of leadership behaviour dimensions in relation to leadership styles

Leadership styles	**Leadership behaviour dimensions**	**According to**
Transformational	Idealized influence	Bass (1997)
	Inspirational motivation	
	Intellectual stimulation	
	Individualized consideration	
Transactional	Contingent reward	
	Active management by exception	
	Passive management by exception	
Ethical	Consideration behaviour	Brown, Treviño & Harrison (2005)
	Interactional fairness	
	Leader honesty	
	Idealized influence	
	Affective trust	
	Negative relation to abusive leadership	
Empowering	Coaching	Arnold et al. (2000)
	Informing	
	Leading by example	
	Showing concern/ Interacting with the team	
	Participative decision-making	
Participative	Participative decision-making	Stoker, Garretsen & Soudis (2019)
	Informing employees	
	Sharing information and ideas	
	Asking employees for input	
	Providing freedom to employees	
Directive	Expectation that instructions are immediately, precisely followed	
	Close supervision	
	Leader makes most decisions	
	Submission of comprehensive reports (employees)	

2.1.3. Impact of Leadership Styles on Performance

The relationship between leadership as an independent and performance as a dependent variable has been studied extensively. As the previous chapter focused on the definitions of several selected leadership styles, the effects of these styles shall now be reviewed on performance outcomes.

This leaves the question what exactly defines performance. Generally, one differentiates between task and contextual performance. The first type revolves around employee behaviour that is directly related to producing goods and services as well as technical processes and can therefore oftentimes be measured qualitatively and quantitatively. The latter type, on the other hand, describes behaviour such as supporting colleagues or providing ideas for improving processes (Kahya 2007: 515). While this contextual performance is not directly related to employees' individual task and performance, it acts "as the critical catalyst for task activities and processes" (Aboazoum, Nimran & Al Musadieq 2015: 42).

Following, a table is presented showing different studies and their results regarding the leadership styles discussed above and their effects on performance. In total, 26 studies were reviewed for this table.

Table 2 Leadership styles and their relation to performance including contextual variables

Leadership style	**Nr.**	**Impact on performance**	**Contextual variables**	**Authors**
Transformational	13	+	Moderator: unit-level absorptive capacity Mediator: unit-level knowledge sharing	Chang, Chao & Chang (2018)
		+ (indirect)	Moderator: virtuality Mediator: self-leadership	Andressen, Konradt & Neck (2012)
		+	Moderator: humour	Avolio, Howell & Sosik (1999)
		+	Moderator: organizational culture	Golden & Shriner (2017)
		+	Moderator: follower motive patterns	Wofford, Whittington & Goodwin (2001)
		+	Potential mediator: leadership training	Dvir et al. (2002)
		+ (indirect)	Mediator: frustration and optimism	McColl-Kennedy & Anderson (2002)
		+ (indirect)	Mediator: satisfaction of followers' basic needs and work engagement	Kovjanic, Schuh & Jonas (2013)

		+	Mediators: affective, motivational, identification, social exchange and justice enhancement	Ng (2017)
		+	Moderator: positive psychological capital	Baig et al. (2021)
		+	Moderator: subordinates' organization-based self-esteem, self-presentation	Rank et al. (2009)
		+	Moderator: team member heterogeneity	Rowold (2011)
		+	Mediator: unit level of potency and cohesion	Bass et al. (2003)
Transactional	4	Not signifi-cantly related	Moderator: positive psychological capital	Baig et al. (2021)
		Not signifi-cantly related	Moderator: subordinates' organization-based self-esteem, self-presentation	Rank et al. (2009)
		+	Mediator: unit level of potency and cohesion	Bass et al. (2003)
		+	Moderator: team member heterogeneity	Rowold (2011)
Laissez-faire	3	-	Moderator: team member heterogeneity	Rowold (2011)
		-	Moderator: positive psychological capital	Baig et al. (2021)
		-	Moderator: humour	Avolio, Howell & Sosik (1999)
Directive	4	+/-	Moderator: newly assigned leader status Mediator: perception of self-confidence	Sauer (2011)
		+	Mediator: organizational commitment, empowerment	Somech (2005)
		+ (indirect)	Moderator: problem structure	Kahai, Sosik & Avolio (2004)
		+/-	Mediators: team learning, behavioural coordination, psychological empower-ment, team mental model	Lorinkova, Pearsall & Sims (2013)
Participative	2	+/-	Moderator: newly assigned leader status Mediator: perception of self-confidence	Sauer (2011)
		+ (indirect)	Moderator: problem structure	Kahai, Sosik & Avolio (2004)
Ethical	5	+	Moderator: publication bias, geograph-ical location	Bedi, Alpaslan & Green (2016)
		Not signifi-cantly related	Mediator: firm-level ethical climate, procedural justice climate	Shin et al. (2015)
		+ (indirect)	Moderator: organizational ethics pro-gram Mediator: organizational ethical culture	Eisenbeiss, van Knippenberg & Fahrbach (2015)
		+	Mediator: goal congruence, psycholog-	Bouckenooghe, Zafar & Raja

			ical capital	(2015)
		+	Moderator: employee proactive personality Mediator: organizational identification	Yang & Wei (2017)
Empowering	5	+ (indirect)	Mediator: knowledge sharing, team efficacy	Srivastava, Bartol & Locke (2006)
		+	Mediator: psychological empowerment	Fong & Snape (2015)
		+	Mediator: trust in leader, psychological empowerment, leader-member exchange Moderator: national culture, employee organizational tenure	Lee, Willis & Tian (2016)
		+	Mediator: psychological empowerment	Kundu, Kumar & Gahlawat (2019)
		+	Mediators: team learning, behavioural coordination, psychological empowerment, team mental model	Lorinkova, Pearsall & Sims (2013)

Notes: Nr. = Number of studies found

Even though some results are inconsistent with findings of other studies (e.g., transactional leadership), it can be derived that transformational leadership as well as transactional, participative, empowering and ethical leadership have an overall positive impact on performance. Moreover, three studies show that laissez-faire leadership is consistently negatively related to performance. However, the reviewed studies also show that the appropriate leadership style depends on contextual variables. Sauer (2011), for instance, proved that directive leadership is effective for incoming leaders, yet destructive if the leader already achieved a high status. In this case, the participative leadership style would be more beneficial. Similarly, the scholars Lorinkova, Pearsall and Sims (2012) found evidence that performance is briefly higher for teams led by directive leaders, however in the long term, teams led by empowering leaders have higher performance rates.

2.2. Covid-19 Pandemic

2.2.1. Crisis Definition

This chapter is dedicated to the question: What it is that characterises a crisis and what distinguishes one crisis from another? Many scholars have attempted to define a crisis and its implications both for the overall population and for organizations. Zhang, Jia & Gu (2012) build their definition on three characteristics, namely chaos, urgency, and psychological shock. Their interpretation of crises is mainly focused on natural disasters such as tsunamis, earthquakes and wildfires (*ibid.*: 4087). The authors (Zhang, Jia & Gu 2012) specify:

> "[F]irst, during the crisis, people are astonished by what happened around and are inclined to behave orderlessly. Second, all of the things change dramatically suddenly; therefore, people are needed to give feedbacks in that urgent time. Third, in crisis situation, inevitably people are shocked by the dramatic change around, especially on the psychological level. Under such a special condition, it is more likely that people are fallen into negative emotion and encountered with great mood fluctuation." (*ibid.*: 4087).

Similarly, Hamblin (1958) claims that "[a] crisis is a generic social experience" (*ibid.*: 322). The authors James and Wooten (2005), on the other hand, differentiate between two types of crises (sudden and smouldering), with both affecting organizations in different ways. Sudden crises for instance include environmental spills, terrorist attacks, natural disasters or power plant explosions, while smouldering crises can occur due to mismanagement, scandals, whistle blowing or product defects, for example (*ibid.*: 142). Other definitions revolve around specifically economic crises and shocks, such as the financial crisis as occurred in the years 2008/2009, or the following European sovereign debt crisis. The authors Kramer & Kramer (2020), for instance, characterise economic shocks

> "as a relatively sudden change and unpredictable changes in the economy that can affect all aspects of the economic system including labor market, specific sectors of the economy and occupational groups and can lead to positive and negative changes in the labor market as well as to the growth or decline of different occupational groups" (*ibid.*: 2).

All those different definitions, regardless of the specific type of crisis, have some features in common, namely a common threat, unpredictability, disruptive characteristics, and negative effects on individuals (Kash & Darling 1998: 180). This thesis focuses on the current global health crisis - the Covid-19 pandemic, which will be further characterised in the following

chapter in order to determine the specific implications and challenges that occur consequently.

2.2.2. Specific Challenges due to Covid-19

This chapter will shed light on the specific challenges caused by the Covid-19 pandemic and what distinguishes this particular crisis from previous crises situations. The outbreak of the Covid-19 pandemic dates back to December 2019 when first cases of pneumonia were observed in Wuhan, China. The Covid-19 virus was identified in early January 2020 and by March, the virus had spread to an extent that large parts of the world enforced lockdown measures to stop further spreading and to *flatten the curve* (Lateef 2020: 117; Rossi et al. 2020: 1). Since then, multiple lockdowns have been enforced, including different measures throughout the world.

The previous chapter provided two definitions of crises – namely natural disasters and economic shocks. Both definitions apply to the Covid-19 pandemic as it is categorised as a global health crisis, which in turn falls under the category of natural disasters (Seddighi 2020: 42). The consequences of this natural disaster have led to a macroeconomic crisis (Bofinger et al. 2020: 259). Hence, what differentiates the Covid-19 pandemic from previous crises situations is the extent to which it impacts every facet of everyday global life, including work, social life, education and health (Restubog, Ocampo & Wang 2020). The authors therefore conclude:

> "This ongoing global health crisis, along with worldwide efforts to contain the virus' transmission by 'flattening the curve', have not only resulted in unparalleled impact on human health and the global economy but also introduced challenges for the working lives and careers of millions of people" (Restubog, Ocampo & Wang 2020: 1).

Every crisis brings about different challenges for organizations, their leaders and employees. Following, three challenges caused by the pandemic are characterised, which are assumed and have been proven to impact employees and leaders tremendously. The pandemic has hit the entire global economy, however some sectors have seen themselves more affected than others. A study conducted by the DIHK (Deutsche Industrie- und Handelskammer e.V.) shows that the tourism and hospitality industries in Germany have been most affected with 94% of the respondent companies expected at the time of questioning severe revenue loss in 2020. In total, 69% of 13,000 interviewed companies forecasted a sales loss (Statista 2020a).

However, due to the limited scope of this thesis, the focus will be on companies and thus employees and leaders who could work throughout the years 2020/21 and did not have to shut down completely.

The three challenges that are discussed below are assumed and have been proven separately to affect employees and leaders as well as the relationship between leadership and performance. The changes due to changed working conditions, virtual environment and psychological well-being, are considered. These three changes relate to questions of *where* and *when* employees and leaders work, *how* they communicate and work with each other, and *how* current events impact those individuals' psychological well-being, which in turn affects their ability to work and perform. The virtual environment could be analysed as part of the working conditions. However, as it has a particular and strong impact on the specific way employees and leaders work, communicate with each other and perform, it will be reviewed separately.

Working conditions

The first challenge relates to the drastic changes of working conditions for employees. With the beginning of the Covid-19 pandemic, a lot has changed for many employees across almost all sectors. Following, different aspects of working condition adaptations are therefore differentiated. The first aspect concerns temporal adaptations due to a reduction of working hours (short-time work) as well as homeschooling and childcare during working hours because of the temporary closure of schools and other childcare facilities. The second factor to be discussed revolves around the lack of separation between personal and professional lives due to working from home. Moreover, spatial constraints, for instance regarding travel restrictions are considered.

The International Labor Organization (2021) determined a loss of 8.8% global working hours relative to 2019. To put this into perspective, compared to the financial crisis of 2009, the loss of working hours is about four times higher (*ibid.*). The financial support by national governments (e.g., Germany, Austria) concerning short-time work prevented many employees from losing their job. Still, the reduction of working hours went along with significant pay cuts (Bundeszentrale für politische Bildung 2020). In January 2021, approximately 2.6 million employees in Germany were still working short time (Statista 2020b). This change not only affected employees personally, but also impacts the working situation itself. Due to the reduction of working hours, employees are only reachable in a very limited time frame, making it more difficult for leaders to get in touch with them. The closure of schools only

exacerbates the situation, as working parents need to balance homeschooling and working. Varying working times contribute to challenges of leaders in coordinating work assignments and communicating with their subordinates (Liao 2017: 649ff.; Bartsch et al. 2021: 74).

The second challenging aspect relates to the workplace itself. Due to the risk of infection, many companies decided to close (parts of) their offices and have employees work from home. Prior to the pandemic, only about 4% of the German workforce had access to working from home. Since the first lockdown period in April 2020, about 20 to 30% of employees have stayed home and worked remotely in order to stop the spread of the virus and to protect the public's and individuals' health (Statista 2020c). This, as well as travel restrictions and the closure of hotels as alternative workspaces, for instance, limits the flexibility of employees in terms of location.

Additionally, the authors Waizenegger et al. (2020) report that "the actualization of functional and social affordances of productivity software like MS Office or Zoom in the home environment leads to a complete blurring of work-life boundaries" (*ibid.*: 426). This lack of separation between professional and private lives is further discussed in an article, by Toniolo-Barrios and Pitt (2021), who elaborate on the challenge, arguing that "[u]nless their dwellings already boasted dedicated home offices, workers were forced to improvise on the fly: dining tables became desks; couches became office chairs; and bedrooms, kitchens, and family rooms became shared workspaces" (*ibid.*: 189). This spatial proximity to the workspace makes it more difficult to psychologically detach from work after hours. A survey among employees and employers revealed that not being able to detach and disconnect from work is one of the most pressing challenges related to working from home for employees and leaders (World Economic Forum 2020).

Thus, the changed working conditions pose a challenge for employees and their respective leaders in terms of adapting to new temporal demands (short-time work, childcare during working hours), as well as spatial restrictions (working from home), leading to a lack of separation between personal and private lives.

Virtual environment

The second aspect is the virtual environment due to working from home. The abrupt shift to working from home required the creation of a virtual environment, which "is characterized by work arrangements where employees are dispersed in various ways (e.g., geographically) and interact within and outside their company through technology" (Bartsch et al. 2021: 72).

This new reality faced employees as well as leaders with great challenges. Firstly, employees had to adapt to working from home using primarily digital tools to communicate and accomplish their tasks. This proved to be especially challenging for many individuals due to weak Internet connections and a lack of digital expertise, among others (DeFilippis et al. 2020). Secondly, managers had to adapt their leadership to match the new situation as well. The digital transformation itself had challenged leaders in the past (Bolden & O'Regan 2016), yet the Covid-19 pandemic and the required fast transition to a virtual environment caught organizations and leaders off guard (Carnevale & Hatak 2020: 184; Bartsch et al. 2021: 72).

Bartsch et al. (2021) point out that little research has been conducted concerning virtual and digital work situations. Some previous studies, however, did investigate the effects of virtual work environments in connection with, e.g., various leadership styles (Muganda & Pillay 2013), team efficacy (Schepers et al. 2011), global virtual teams (Davis & Bryant 2003) and self-managed teams (Carte, Chidambaram & Becker 2006). The scholars Hertel, Geister and Konradt (2005) studied the effects of virtuality, and emphasize possible downsides such as misunderstandings, isolation, less interpersonal exchange and role ambiguity. Some recent studies investigate the effects of virtual work environments caused by Covid-19. Bartsch et al. (2021), for instance, analysed the relation of leadership effectiveness and performance in the context of a virtual environment during the Covid-19 pandemic.

Another study by Kirchner, Ipsen and Hansen (2021) focused on examining leaders' experiences in relation to distance management. Some of the most pressing challenges accompanying distance management in a virtual environment reported by managers are organizing work and communicating with subordinates. The lack of face-to-face interaction, which is essential for efficient communication due to the importance of facial expressions and body language, is reportedly missing in this work environment. Moreover, informal contact and communication between leaders and employees is non-existent (*ibid*.: 3f.). The scholars argue that specifically for leaders, "there is a risk that the working day will be tightly packed with meetings without breaks, as the calendar systems do not take time for breaks into account" (*ibid*.: 5).

A recent study by DeFilippis et al. (2020) reports that the number of meetings and emails as well as the number of attendees per meetings increased during the pandemic while the length of meetings decreased. Additionally, the scholars find that more emails are sent after hours (*ibid.*: 6f.). Moreover, a recent article indicates that working from home during the Covid-19 pandemic increases technostress particularly for employees with workaholic tendencies

(Spagnoli et al. 2020). Technostress is defined as "stress caused by an inability to cope with the demands of organizational computer usage" (Tarafdar, Tu & Ragu-Nathan 2010: 304).

This is not to say that virtual environments might not also have a positive impact. The elimination of commute, for instance, is often regarded as a positive side effect (Kirchner, Ipsen & Hansen 2021: 4). Moreover, the flexibility associated with a virtual environment can be beneficial for both employees and leaders (Liao 2017: 648). Thus, leaders need to consider and tackle the described challenges as well as try to utilize the positive effects related to the virtual environment.

Psychological distress

The third challenge concerns the psychological well-being of individuals during times characterised by uncertainty. This aspect differs from the previously named challenges. The first two changes described relate directly to the working situation of individuals. This factor of psychological well-being goes beyond the professional lives of individuals. Some stress factors stem from working situations and conditions such as irregular working hours, increased work demands and short time work (going along with reduced income), which in turn can contribute to physical health problems such as headaches, fatigue, sleep disorders and stomach problems (Halkos & Bousinakis 2017; Restubog, Ocampo & Wang 2020; Shigemura et al. 2020). Moreover, a study by Poulsen and Ipsen (2017) confirmed that distance work can lead to loneliness and frustration due to a feeling of isolation (*ibid.*: 43). Additionally, the results of Maunder et al. 's study (2003) following the SARS outbreak revealed a diminished morale among health care workers due to the isolation from co-workers (e.g., non-physical contact). Consequently, the authors emphasize the importance of leadership during crisis situations in order to address these challenges (*ibid.*: 1250).

Other psychological effects occur due to conflicts between work demands and family responsibilities such as inter-role conflict and family-work interference (Kossek et al. 2012; Allen, Cho & Meier 2014). The closing of schools in lockdown periods and limited access to child-care services only intensifies the situation for working parents (Cauchemez et al 2009; Lee 2020).

Singles or childless employees are impacted differently as "they may be at greatest risk of loneliness, a felt lack of purpose, and associated negative effects on well-being" (Carnevale & Hatak 2020: 183). Regardless of an employee's relationship or family status, working from home increases a blurring of boundaries between private and professional life, and thus

makes it more difficult for employees to distance themselves from their work (*ibid.*: 184). The psychological consequences arising from this double pressure can include emotional exhaustion, burnouts and stress, among others (Sonnentag, Kuttler & Fritz 2010: 355ff.).

Additionally, disease outbreaks alone affect individuals and are verifiably related to psychological burdens such as higher rates of depression and distress (Bai et al. 2004; Jones & Salathé 2009; Bults et al. 2011; Shultz et al. 2016), fear of infection (Horney et al. 2010; Leggat et al. 2010; Rubin, Potts & Michie 2010; Jehn et al. 2011; Lateef 2020: 116), general worry (Thompson et al. 2017) or decreased life quality (van Hoek et al. 2011).

A study conducted in the beginning of the pandemic (March/April 2020) showed the prevalence of anxiety and worries related to Covid-19. From a total of 6,509 participants, 50% declared to suffer from psychological distress and anxiety due to the current situation (Petzhold et al. 2020). The authors Pfefferbaum and North (2020) point out that certain individuals, especially those considered to be part of risk groups (chronic illnesses, obesity, advanced age, etc.) might be particularly prone or vulnerable to the psychological consequences of the current crisis (*ibid.*: 511). Additionally, measures to stop the spread of the Covid-19 virus including travel restrictions, social distancing, quarantine and curfews further contribute to the psychological distress of individuals (Lateef 2020; Restubog, Ocampo & Wang 2020; Pfefferbaum & North 2020).

Rossi et al. (2020) focused on the mental health effects related to the first lockdown period in Italy and found higher rates of anxiety, depression, insomnia and perceived stress among employees. These effects are directly related to factors such as quarantine, discontinued working activities or even losing someone to the virus (*ibid.*: 4). Thus, Restubog, Ocampo and Wang (2020) point out the fact that "[d]isease outbreaks […] can […] elicit both acute and long-term effects on individuals' well-being" (p.1).

As mentioned before, this characterised challenge differs from the two previous aspects, because it is a consequence of changes and limitations in the professional and private lives of employees due to the pandemic. Yet, it is a crucial factor to be considered because it likely impacts the performance of individuals. The authors Kirchner, Ipsen and Hansen (2021) claim that "[e]mployees' health, resilience and well-being when working across distance is critical to sustain operations and ensure performance" (p.1).

Various studies discovered a negative relation between individuals' work and private related stress, and performance outcomes. The authors Hourani, Williams and Kress (2006), for in-

stance, conducted a study with active military personnel and found high stress levels to be related to mental health problems and a loss in productivity. Another study by Poulsen and Ipsen (2017) emphasizes the direct connection between employees' well-being and performance, and therefore the importance of organizations and leaders to consider and address subordinate needs. Thus, the psychological well-being of employees in times of the Covid-19 pandemic will likely affect leadership and its relation to performance.

Based on the provided data and information, the following presupposition is put forward:

I. Leaders and their employees are frequently challenged by changed working conditions, a virtual environment and psychological distress due to the pandemic.

2.3. Leadership, Performance and Crisis

2.3.1. Impact Crisis on Leadership and Performance

One of the first scholars to analyse the impact of crises on leadership was Hamblin (1958). During the time of the publication the *Trait Approach* to leadership was predominantly used as a basis to understand and analyse leadership. Yet, the author applied the *Behavioural Approach* in his experimental study and verified the hypotheses that "leaders have more influence during periods of crisis than during non-crisis periods, and groups tend to replace their old leader with a new leader if the old leader does not have an obvious solution to a crisis problem" (*ibid.*: 331). Moreover, did the author thereby define crisis as a situational variable (*ibid.*: 323).

Boin et al. (2010) studied political leadership in context of Hurricane Katrina in the US and find two leadership dimensions to be particularly important in a crisis situation, namely the need for control and sensitivity to context. The authors argue that leaders' need for control is related to their individual power needs, which is reflected in a rather centralized decision-making process as well as a general hands-on approach. The other dimension – sensitivity to context – goes along with leaders' higher need for information including gathering information from others in order to make decisions. The scholars conclude that both dimensions are crucial in order to lead efficiently during a crisis (*ibid.*: 714,720).

A recent study by Stoker, Garretsen and Soudis (2019) reviews leadership behaviour in the context of the 2008 financial crisis. Up until the last year, the financial crisis of 2008 was "the largest global economic shock in the post-WWII period, potentially affected organiza-

tions in an unprecedented manner" (*ibid*.: 199). The theoretical basis of their research is called the *threat-rigidity hypothesis*, which claims that when exposed to a threat, organizations react in a way that mirrors rigidity. Derived from this hypothesis, the scholars argue that in a crisis an increase in directive leadership would be likely. The study, analysing data from over 20,000 managers from 36 countries, proves that directive leadership was used more often during the period of the financial crisis, however the scholars admit, "that the effect-sizes are relatively small" (*ibid*.: 208). Nevertheless, the authors were able to "show that an event like the financial crisis in itself is a contextual variable that shapes leadership behavior" (*ibid*.: 200).

Another study, conducted by Zhang, Jia and Gu (2012), reflects on transformational leadership and its effectiveness against the background of a severe earthquake in China in the year 2008. The results of the study show that in a crisis situation transformational leadership, both effectively and efficiently, maintains motivation of employees. Additionally, the authors provide evidence that an emphasis on a good relationship with subordinates (high level of leader-member exchange), emotional control, self-sacrificial behaviour of leaders and the application of the sense-making approach fosters value congruence, which ultimately contributes to leadership effectiveness (*ibid.*: 4104).

The studies mentioned above, analyse the effects of crises on leadership behaviour. Other research is dedicated to the psychological effects on individuals due to a crisis, which ultimately impact subordinates' performance and therefore need to be addressed by the leader in terms of adapting their leadership style, if necessary (Frone 2018: 257).

Various studies confirm the negative effects crises have on employees. Frone (2018) studied the effects of the 2008 financial crisis regarding the relation between job and employment insecurity to physical and mental health, as well as organizational commitment. Concerning the mental and physical health, it is argued that "[e]mployment provides critical manifest (income, health benefits, and retirement benefits) and latent (time structure, social contacts, collective purpose, status and identity, and regular activity) resources" (*ibid*.: 249) and that the fear of losing employment can have negative psychological and physiological consequences.

Additional stress factors during a crisis are reduced working hours, reduced payment, interpersonal conflict or higher work demands (Tausig & Fenwick 1999: 1ff.; Houdmont, Kerr & Addley 2012: 98f.) which negatively impact affective organizational commitment and thus lastly employees' performance (Cheng & Chan 2008; Meyer et al. 2002; Sverke, Hellgren &

Näswall 2002). The results of Frone's study (2018) confirm a decrease in affective organizational commitment during the 2008 financial crisis as well as a decline in physical and mental health (*ibid.*: 256f.).

Based on chapter 2.2.2 and 2.3.1 the following presupposition is made:

II. Leadership adaptations are required in order to cushion any negative and leverage possible positive effects on performance resulting from

a) changed working conditions

b) a virtual environment

c) psychological distress

2.3.2. Literature Review: Working Conditions, Virtual Environment, Psychological Distress

Chapter 2.1.1 discussed the *Situational Approach* including *Contingency Theories*. These theories argue that leadership happens in a specific context and thus, needs to be adapted to the respective situation. Building on this assumption, it can be argued that the current situation – namely the Covid-19 pandemic – impacts the working life of leaders and employees tremendously, thus making it necessary to adapt the leadership style to meet the specific demands and needs. Previous studies have established that crises act as contextual variables regarding leadership (Hamblin 1958; Stoker, Garretsen & Soudis 2019). The three challenges identified in chapter 2.2.3 represent the situational variables caused by the pandemic and are assumed in this thesis to impact leadership and performance and their relationship. In order to determine what leadership styles might positively impact performance given the current challenges, previous studies with comparable moderating variables as well as studies that examined leadership in the context of similar variables, are reviewed.

1. Working conditions

The impact of working conditions on leadership and performance has not gained a lot of academic attention so far. Moreover, it needs to be addressed that working conditions entail different aspects. As the purpose of this chapter is to find previous studies with comparable moderating variables to the current challenge, it is necessary to consider the aspects that are incorporated in the qualitative study. The adapted working conditions discussed in chapter 2.2.2 refer to temporal changes (e.g., homeschooling, short-time work), the specific impact

of working from home including a lack of (spatial) separation between professional and personal life, and lastly spatial constraints referring to, for instance, travel restrictions.

Various authors pursued research concerning the effects of spatial and temporal distance in the context of leadership and performance. The authors Poulsen and Ipsen (2017) include dimensions regarding dispersion in teams, namely: temporal, spatial and configurational (*ibid.*: 39). This specific differentiation is based on a definition by O'Leary and Cummings (2007), who define dispersion as

> "(1) the average spatial distance among team members; (2) the extent to which team members have overlapping work hours; and (3) the number of sites at which members are located, their isolation from other members, and the balance between subgroups of members across sites" (p.434).

The positive effects of spatial flexibility described by Liao (2017) indicate that "[e]mployees may enjoy the flexibility of conducting their work in far-flung locations, ranging from their employer offices to client sites and from hotel rooms to their homes" (p.648). Further, it is argued that such granted flexibility increases job satisfaction due to a better work life balance of employees (*ibid.*: 648). While travel restrictions during the Covid-19 pandemic would be considered as a spatial constraint, it is possible to argue that working from home could be regarded as spatial flexibility, if employees have the option of working in the office as well.

The two colleagues Mohammed and Nadkarni (2011) published a study that analyses the effects of temporal diversity on leadership and team outcomes. It is stated that varying temporal preferences could either increase team performance as different timely requirements are met, or it could cause conflicts within teams' due to arguments about scheduling (*ibid.*: 489). The results of the study confirm that the factors time urgency as well as pacing style could create ambiguity in teams (*ibid.*: 502).

Gonsalves (2020) defines temporal flexibility as "the extent to which workers can control when […] their work tasks are completed" (p.1060). Various studies prove that the possibility to flexibly adapt the own working schedule positively impacts work-family life as well as the well-being of employees (Kelly et al. 2008). Moreover, research suggests that flexible work policies, such as temporal flexibility, are often found in high-performing companies (Osterman 1995) and are used by high-performing individuals (Kelly & Kalev 2006).

Bartsch et al. (2021) point out the difficulties of leaders to coordinate teams with varying working hours due to, for instance, the closure of schools and other childcare facilities dur-

ing the pandemic. According to the authors, this could ultimately condition a lack of clarity regarding tasks and their implementation (*ibid.*: 74).

Sonnentag (2012) explicitly calls for studies that examine the effects of detachment from work when working remotely from home as "homes are [usually] a place for restoration" (p.117). Studies show that psychological detachment from work positively impacts task performance (Binnewies, Sonnentag and Mojza 2010; Wendsche & Lohmann-Haislah 2017). Working from home seems to blur the lines between personal and professional life, reducing the ability to psychologically detach from work. This negatively impacts motivation as well as productivity (Toniolo-Barrios & Pitt 2021: 190).

Table 3 Positive effects of varying working conditions

Working condition	**Impact**	**Authors**
Spatial flexibility	Higher job satisfaction, work-life balance	Liao (2017)
Temporal flexibility	Higher employee well-being, work-family life	Kelly et al. (2008)
Temporal flexibility	Higher team performance	Mohammed & Nadkarni (2011)

Table 4 Negative effects of varying working conditions

Working condition	**Impact**	**Authors**
Time urgency, pacing style	More ambiguity	Mohammed & Nadkarni (2011)
Different time requirements	Potential for conflict	Mohammed & Nadkarni (2011)
Blurring boundaries	Decreased motivation, productivity	Toniolo-Barrios & Pitt (2021)
Varying working hours	Lack of (task) clarity	Bartsch et al. (2021)

The effects of varying working conditions on leadership and performance have now been determined. However, the question of what leadership styles might positively or negatively impact performance given flexible working conditions, is more difficult to determine as research in this regard is rare.

Poulsen and Ipsen (2017) argue that in the context of disperse working conditions, leaders need to enhance trust by listening to the needs of employees. This shall improve performance as well as the well-being of subordinates. Moreover, it is stated that in the context of disperse working conditions, leaders need to enhance trust by listening to the needs of employees (*ibid.*: 44). Additionally, Liao (2017) emphasizes that in order to facilitate team ef-

fectiveness, leaders need to direct special attention to promoting interaction between geographically separated team members (*ibid.*: 653).

Concerning the geographic distance between leaders and employees, research indicates that transformational leadership is less efficient as possibilities to pay attention to employees and their needs might decrease (Dubinsky et al. 1995; Humphreys 2002). In their study, the scholars Andressen, Konradt & Neck (2012) found evidence that supports the previous findings. According to their results, the situational variable of physical distance diminishes the impact of transformational leadership on self-leadership (*ibid.*: 77ff.).

Lastly, Mohammed and Nadkarni (2011) introduce the concept of temporal leadership. This new leadership style shall supposedly address the needs related to temporal flexibility such as scheduling work activities and allocating resources that are considered temporal (*ibid.*: 489f.). The quantitative study reveals that leaders are "key players in the scheduling, synchronization, and allocation of temporal resources" (*ibid.*: 501). The results confirm a moderating effect of temporal leadership on the relationship between temporal diversity and team performance as well as an overall positive impact of temporal leadership on performance (*ibid.*: 489ff.).

Table 5 Effective leadership behaviours in the context of varying working conditions

Leadership behaviour	**Impact**	**Author**
Enhancing trust by considering employees needs	Facilitate performance and well-being	Poulsen & Ipsen (2017)
Scheduling work activities and allocating resources	Address temporal needs	Mohammed & Nadkarni (2011)
Promoting interaction between team members	Facilitate effectiveness	Liao (2017)

2. Virtual Environment

The abrupt shift to a virtual environment caused various new challenges for employees, leaders and organizations. Some studies researched the impact of virtuality prior to the current crisis. However, due to the quick unfolding of the pandemic and the associated proliferation, use and dependence on a virtual environment, the issue has reached a new dimension and therefore requires a new assessment. As communication and coordination of virtual work instead of face-to-face interaction will be central aspects in the qualitative study, similar situational variables are considered.

Previous research determined the importance of leadership effectiveness for virtual teams to work successfully (Bell & Kozlowski 2002; Morgeson, DeRue & Karam 2010; Liao 2017). Yet, scholars claim that leading a virtual team is facing leaders with greater challenges than leading traditional teams (Bell & Kozlowski 2002; Cohen & Gibson 2003; Carte, Chidambaram & Becker 2006; Hoch & Kozlowski 2014). The question at hand is, how the leadership task differs in this context and what makes it more difficult. One challenge refers to the potential to motivate and influence employees. Due to the distance, the influence of leaders is reduced, which ultimately impacts the relationship between leader and employee (Andressen, Konradt & Neck 2012: 73; Bartsch et al. 2021: 74).

Scholars analysing the moderating effects of virtuality frequently report various challenges related to communication between leaders and subordinates. The authors Davis and Bryant (2003) distinguish between synchronous (e.g., telephone, videocall) and asynchronous (e.g., e-mail, messages) communication and emphasize the difficulty of identifying and resolving problems in a virtual environment (*ibid*.: 310,320). This challenge can be attributed to a lack of face-to-face interaction. Reading facial expressions and noticing other non-verbal communication is crucial for building and maintaining relationships (Bell & Kozlowski 2002: 22; Huang, Kahai & Jestice 2010: 1099).

In the current foremost virtual environment face-to-face interaction is rare. While videoconference tools such as Zoom, Microsoft Teams or Skype allow for some form of visual communication, they cannot replace face-to-face meetings and conversations. Conveying particularly emotional messages via technological tools becomes more difficult and thus, misunderstandings due to the usage of IT communication tools, are more likely (Davis & Bryant 2003: 310; Zaccaro & Bader 2003: 386).

Liao (2017) asserts that leaders must spend additional time and effort to build trust and establish a shared mental model in a virtual work environment. Nonetheless, the scholar proposes that "[t]he effects of leader behaviors on team and individual processes and outcomes are stronger in teams with high virtuality than in less virtual teams" (*ibid*.: 657). Contrarily, Davis and Bryant (2003) argue that information technology might decrease the influence of leaders, especially if technology is used inefficiently. The efficient use of technological tools for communication purposes is crucial. The authors argue that infrequent communication could imply a laissez-faire leadership (*ibid.*: 326).

Moreover, Hertel, Geister and Konradt (2005) argue misunderstandings, isolation, less interpersonal exchange and role ambiguity are challenges, that relate to a virtual environment. Bell and Kozlowski (2002) add monitoring performance, mentoring employees, team development as well as the implementing problem solving to the challenges faced by leaders in the context of virtual teams.

Technostress might be an additional challenge in the current virtual environment particularly for employees with workaholic tendencies, according to Spagnoli et al. (2020). Thus, the authors argue that the leader's ability to manage and support employees is essential to prevent negative work and health outcomes.

Huang, Kahai and Jestice (2010) studied the lack of media richness as a challenge in a virtual environment. Media richness is defined as "the ability of the medium to enable the development of a shared understanding in ambiguous situations with a given time period" (*ibid.*: 1100). Additionally, the authors claim that impromptu meetings between leaders and employees are more difficult (*ibid.:* 1099).

Table 6 Challenging effects of a virtual work environment

Challenging effects	**Authors**
Lack of face-to-face interaction	Davis & Bryant (2003)
Difficult to identify and resolve problems	Davis & Bryant (2003), Huang, Kahai & Jestice (2010)
Misunderstandings due to virtual communication	Davis & Bryant (2003), Zaccaro & Bader (2003); Hertel, Geister & Konradt (2005)
Difficult to monitor performance	Bell & Kozlowski (2002), Huang, Kahai & Jestice (2010)
Difficult to perform impromptu meetings	Huang, Kahai & Jestice (2010)
Decreased leader influence	Davis & Bryant (2003); Andressen, Konradt & Neck (2012)
Difficult to develop trust and cohesion	Huang, Kahai & Jestice (2010), Liao (2017)
Isolation, role ambiguity and less interpersonal exchange	Hertel, Geister & Konradt (2005)
Team development difficult	Bell & Kozlowski (2002)
Difficult to motivate and influence employees	Bartsch et al. (2021)
Technostress	Spagnoli et al. (2020)

Now that the challenges related to virtuality have been established, associated leadership styles shall be reviewed, which are assumed to positively or negatively impact performance in face of virtuality.

A conceptual framework, developed by Zaccaro and Bader (2003), identifies three leader roles for virtual teams, which the authors assume to be crucial for virtual team effectiveness. The first role is called *team liaison*. It specifies the importance of the leader's ability to notice and interpret contextual events within the team and within the broader environment. The second role – *team direction setter* – refers to the need for leaders to set and communicate a purpose. The scholars argue that "leaders need to act as 'sense-maker' and as 'sense-givers' in working with their team members" (*ibid.*: 381). The third and last role, namely the *team operational coordinator*, is responsible for developing and allocating resources and for empowering and motivating the team (*ibid.*: 381). These three roles are assumed to enhance effectiveness by increasing cohesion, trust, efficacy, a shared understanding as well as managing team conflict, promoting team coordination and developing social capital (*ibid.*: 382). The authors refer to this style as e-leadership.

An experimental study by Hoyt and Blascovich (2003) researched the effects of transactional and transformational leadership in both virtual and physical environments. The outcomes of their study reveal that while transformational leadership increases qualitative performance of employees, it decreases quantitative outcomes compared to transactional leadership (*ibid.*: 703). Additionally, the scholars prove that subjective outcomes (satisfaction and group cohesiveness) are higher for transformational leaders than transactional leaders. The variable trust acts as a mediator in this model. This implies that satisfaction and group cohesiveness are higher in transformational leaders due to a higher trust (*ibid.*: 704). Concluding the scholars remark that "virtual environment technology may be an effective tool that holds promise for work groups and does not constrain leadership style" (*ibid.*: 705).

Carte, Chidambaram & Becker (2006) identify leadership behaviours, related to directive leadership, as particularly important to enhance effectiveness in a virtual environment. The leadership behaviours that show significant impact on effectiveness include for instance motivation to complete a task, provision of information as well as establishing stability (*ibid.*: 327, 336). According to their study, another indicator for virtual effectiveness relates to communication, meaning the amount and quality of messages sent within a team. The scholars found evidence that a high number of messages that entail qualitative leadership behaviour increases performance (*ibid.*: 336). However, it needs to be taken into consideration that

the study examined self-managed teams, which only worked together for a limited time. Thus, the scholars did not analyse the behaviour of a designated leader, but rather the leadership behaviour of all team members.

Moreover, due to the lack of face-to-face interaction it is suggested that leaders should pay special attention to "convey cues for attentiveness, warmth, emotion and understanding in order to establish trust and strengthen the interpersonal relationship" (Davis & Bryant 2003: 322) in order to prevent misunderstandings. Similarly, the necessity for leaders to prevent conflicts and dysfunctions and adapt their behaviour to meet the needs of their employees is illustrated (*ibid.*: 310ff.). Regarding the challenge to motivate employees and the reduced influence of leaders, it is argued that leaders should explicitly empower employees by strengthening the self-management skills of subordinates in order to enhance flexibility (Bartsch et al. 2021: 74).

Golden and Veiga (2008) examined how virtual environments moderate the relation between leader-member relationships and job satisfaction, commitment and performance (p.77). The findings of their study confirm the significant moderating effect of virtuality on supervisor-subordinate relationship and the outcome variables. The highest rates for job satisfaction, commitment and performance are related to the highest levels of virtuality and the highest quality of leader-member relationship. The context of virtual work particularly impacts the relationship between the quality of leader-member relations and organizational commitment. High levels of virtuality combined with a high-quality relationship between leader and subordinate significantly increases employees' organizational commitment. However, if the relationship with the leader is qualitatively low, it significantly decreases employees' commitment. Interestingly, however, virtuality positively impacts performance, independent of the perceived relationship quality (*ibid.*: 85).

Purvanova and Bono (2009) studied the effects of transformational leadership by comparing behaviour of leaders in face-to-face and virtual team contexts. The results of their experimental study reveal that transformational leadership has a stronger impact on performance in virtual teams compared to face-to-face teams. Moreover, did the scholars find "considerable variability in leaders' behavior across face-to-face and virtual teams" (*ibid.*: 352). This result is in line with the core assumption of the *Situational Approach* and *Contingency Theories,* as it indicates that leaders need to adapt their behaviour according to the demands of the respective situation (*ibid.*: 345).

Huang, Kahai and Jestice (2010) conducted a study investigating the effects of transactional and transformational leadership on cooperative climate and task cohesion. The findings of this study are consistent with previous research (Joshi, Lazarova & Liao 2009; Purvanova & Bono 2009), which indicates that transformational leadership is particularly impactful in challenging situations for virtual teams (Huang, Kahai & Jestice 2010: 1107). When virtual teams face challenges, transformational leadership increases a cooperative climate, which ultimately enhances productivity and performance. Transactional leadership on the other hand proves especially efficient to improve task cohesion. Therefore, the authors argue that both leadership styles are needed to improve team performance in virtual teams (*ibid.*: 1108).

A study by Andressen, Konradt & Neck (2012) analyses the relation between self-leadership, transformational leadership, motivation, job performance and commitment. Virtuality is examined as a moderating variable in this leadership model (*ibid.*: 68ff.). The study was conducted using a data set of 681 employees in 129 teams (*ibid.*: 73). The results confirm a moderating effect of virtuality on the relationship between transformational and self-leadership. This suggests a smaller impact of transformational leadership on self-leadership in a virtual context. In addition, the scholars find a higher influence of self-leadership on motivation in virtual teams (*ibid.*: 77).

Liao (2017) developed a conceptual model of leadership in virtual teams outlining task - and relationship-oriented leadership behaviour in relation to individual and team effectiveness. In total, twelve propositions are presented, addressing various behaviours that are assumed to enhance effectiveness. Such behaviour includes, among others, guidance, coaching, knowledge sharing, building trust, resolving conflicts and the formation of shared leadership (*ibid.*: 651ff.). Moreover, the scholar assumes that task-oriented behaviours have a particularly strong influence on effectiveness, if the complexity of tasks is considered high. Similarly, relationship-oriented behaviour has a stronger influence on effectiveness if the task interdependence is considered high (*ibid.*: 656).

Building on Liao's (2017) assumptions regarding the importance of task- and relationship-oriented leadership behaviour in virtual teams, a recent study by Bartsch et al. (2021) focused on two leadership behaviours - enabling leadership behaviour as a relationship-oriented leadership behaviour and managing leadership behaviour as a task-related leadership behaviour. The scholars report results that indicate the importance of both leadership behaviours in order to meet the need for guidance, flexibility, support and autonomy, and

lead effectively and efficiently in a virtual environment (*ibid.:* 81). The need to strengthen self-leadership is additionally clarified in order to enhance and ensure flexibility (*ibid.*: 74).

Table 7 Effective leadership styles in the context of virtuality

Leadership style	**Impact**	**Authors**
Transformational	Increased qualitative performance	Hoyt & Blascovich (2003)
	Higher satisfaction and group cohesiveness due to higher trust	Hoyt & Blascovich (2003)
	Stronger impact on performance compared to face-to-face teams	Purvanova & Bono (2009)
	Increased cooperative climate, which increases performance	Huang, Kahai & Jestice (2010)
	Smaller impact on self-leadership	Andressen, Konradt & Neck (2012)
Transactional	Increased quantitative outcome	Hoyt & Blascovich (2003)
	Increased task cohesion	Huang, Kahai & Jestice (2010)
Directive	Enhanced effectiveness	Carte, Chidambaram & Becker (2006)

Table 8 Effective leadership behaviours in the context of virtuality

Leadership behaviour	**Impact**	**Authors**
Notice and interpret contextual events	Increased virtual team effectiveness	Zaccaro & Bader (2003)
Set and communicate purpose		
Develop and allocate resources		
Empower and motivate employees		
Motivation to complete task	Increased effectiveness	Carte, Chidambaram & Becker (2006)
Providing information		
Establish stability		
Guidance and flexibility	Increased efficiency and effectiveness	Liao (2017), Bartsch et al. (2021)
Support and autonomy		
Strengthen self-leadership	Enhanced flexibility	Bartsch et al. (2021)
Coordinate tasks, clarify expectations	Increased team cohesiveness	
Convey empathy, understanding	Strengthened interpersonal relationship, trust	Davis & Bryant (2003)
Prevent dysfunction, conflict	Better team cohesion	Davis & Bryant (2003)

3. Psychological Distress

The last contextual factor that shall be discussed in this chapter is the psychological well-being and distress of employees and how mental distress challenges leadership and impacts performance. Numerous studies have been published, discussing and investigating the effects of both positive mental states, such as optimism and resilience, and negative conditions, such as stress, on performance. Firstly, it will be discussed how leadership and performance is impacted by employees' well-being, before analysing how the relationship between leadership and performance is affected by different well-being and distress variables.

Hourani, Williams and Kress (2006) analysed data from over 12,000 military employees in order to draw conclusions on the relationship between work-related stress and productivity and mental health. The results of their analysis reveal a strong negative correlation between stress and productivity as well as a positive relation to mental health problems. This indicates that high constant stress rates decrease productivity severely and increase mental illnesses (*ibid.*.: 849ff.). These findings are in line with prior research that proves that reduced occupational stress positively impacts mental health and performance (Bond & Bunce 2001, 2003). The authors Boles, Pelletier and Lynch (2004) contributed to the discussion with their study, providing evidence that high levels of stress relate to impaired performance.

Kotteeswari and Sharief (2014) argue that "there is both positive and negative stress, depending on each individual's unique perception of the tension between the two forces" (p.18). Yet, the authors state that occupational stress negatively impacts performance and that stress at work might even affect one's physical health (*ibid.*: 18). Similarly, Schabracq and Cooper (2000) assume harmful effects due to job stress such as higher turnover rates, increased conflicts, poor communication, decreased job satisfaction and lower motivation (*ibid.*: 239).

There exist, however, other factors besides job stress that impact the well-being of individuals. Studies that investigated the effects on the well-being of working spatially distant, report positive related outcomes such as professional stimulation and fulfilment of self-actualization needs, but also negative consequences such as frustration, loneliness and isolation (Brödner 2009; Whittle & Mueller 2009; Ipsen & Jensen 2012; Sørensen & Holman 2014). The authors Poulsen and Ipsen (2017) thus claim "physical and social working conditions at the work sites, both nationally and internationally, directly affect the employees' well-being and thus, their performance" (p.43). Consequently, the scholars emphasize the

importance of considering and addressing employees' needs to enhance motivation particularly regarding distance work (*ibid.*: 43).

Some studies examined the moderating effects of positive well-being variables, including positive psychological capital (Baig et al. 2021), follower self-esteem (Rank et al. 2009; Avey, Palanski & Walumbwa 2011) or optimism (Nguyen et al. 2016), on leadership and various outcome variables. These studies provide evidence that various aspects that relate to the well-being of individuals and their mental state impact the relationship between leadership and performance. Positive psychological capital refers to strength and capabilities of individuals that can be developed and used to increase performance (Luthans et al. 2007: 542). Such strengths include hope, resilience and optimism (Baig et al. 2021: 1090).

According to a study by Montano et al. (2017) transformational leadership, relations-oriented and task-oriented behaviour, as well as qualitative leader-employee interactions positively impact the well-being of employees such that they reduce the likelihood of burnout or stress. The results of their study confirm a partial mediation effect of mental health in the relationship between leadership and performance (*ibid.*: 341). In their recent study Bartsch et al. (2021) derive from those findings that "leaders who provide their employees with flexibility regarding when and how they perform their work, establish an open error culture, and foster teamwork buffering individual as well as tensions within the team" (p.76).

A study conducted by Pyc, Meltzer and Liu (2017) examined the mediating effect of anxiety and depression regarding ineffective leadership (abusive and authoritarian) and negative outcomes, such as poor performance and job dissatisfaction. The results of this study confirm the mediation effect of anxiety and depression as well as the relationship between abusive and authoritarian leadership and negative outcomes.

Table 9 Effects of psychological well-being variables

Well-being, distress	**Impact**	**Authors**
High stress level	Decreased productivity, increased mental illness	Hourani, Williams & Kress (2006)
Reduced occupational stress	Positive impact productivity, mental health	
Occupational stress	Decreased performance, negative effect on physical health	Kotteeswari & Sharief (2014)
Job stress	High turnover rates, increased conflict, poor communication, decreased job satisfaction and motivation	Schabracq & Cooper (2000)

Positive psychological capital	Moderating effect on leadership and performance	Baig et al. (2021)
Optimism	Moderating effect on leadership and resilient behaviours	Nguyen et al. (2016)
Follower self-esteem	Moderating effect on ethical leadership and organizational citizenship behaviour, deviant behaviour	Avey, Palanski & Walumbwa (2011)
Anxiety	Mediated by abusive and authoritarian leadership, impacting poor performance	Pyc, Meltzer & Liu (2017)
Depression	Mediated by abusive leadership, impacting poor job satisfaction, turnover intentions	
Mental health	Partially mediating by leadership, impacting job performance	Montano et al. (2017)
Psychological strain	Moderating effect on empowering leadership behaviour (autonomy) and proactive performance	Roberge & Boudrias (2021)

Concerning the relationship between leadership and performance in the context of psychological distress, little is known. Numerous studies address the impact different leadership styles have on the well-being of employees. Moreover, various studies analyse the moderating effect of positive well-being variables such as positive psychological capital, optimism and follower self-esteem. The impact that psychological distress has as a situational variable on leadership and performance is however not well researched. Only one study investigating this influence direction could be found.

The previously discussed study of Baig et al. (2021) conducted in the context of the textile sector in Pakistan, proves that positive psychological capital positively moderates the relationship between transformational leadership and performance. The scholars conclude that "[o]rganisations with leadership capabilities can use their psychological capital more efficiently, which enhance the employee's performance" (*ibid.*: 1101). Additionally, the study reveals the negative effect of laissez-faire leadership and performance when moderated by psychological capital. This outcome is accredited to the fact that laissez-faire leaders fail to motivate their followers (*ibid.*: .1100). Lastly, the authors show that the impact of transactional leadership on performance was only significantly positive, when moderated by psychological capital.

Moreover, Nguyen et al. (2016) researched what leadership style could positively impact resilient behaviours of employees, moderated by optimism and proactive personality. Previous research (Mills & Ungson 2003; Ahearne, Mathieu & Rapp 2005; Seibert, Wang & Courtright 2011; van Dierendonck & Dijkstra 2012; Martin, Liao & Campbell 2013) indicates that empowering leadership contributes to "develop subordinates' self-management skills through delegation of authority, participative decision-making, ensuring meaningful work, conveying confidence in subordinates' capacity to achieve results, and personal support" (Nguyen et al. 2016: 14). These characteristics of empowering leadership shall relate to the underlying basis of resilience, namely learning, networking and adaptability. Resilience is defined "as a dispositional mechanism that enable people to bounce back following crises or traumatic events" (*ibid.*: 13). The findings of their study underline the contributing effect of optimism for resilient employee behaviours. Further, the scholars find that contingent reward leadership only significantly enhances employee resilience when moderated by high levels of optimism (*ibid.*: 17, 18).

Avey, Palanski and Walumbwa (2011) studied the moderating effect of follower self-esteem on ethical leadership and follower behaviour. The variable self-esteem, which means "the extent of positive self-worth that an individual ascribes to himself or herself" (*ibid.:* 574*)*, relates to the behaviour of employees. The study showed that the self-esteem of followers moderates the relationship between ethical leadership and organizational citizenship behaviour as well as deviant behaviour. If subordinates have a rather low self-esteem, ethical leadership has a higher influence regarding more citizenship behaviour and less deviance behaviour. If, however, subordinates have a high self-esteem, the impact of ethical leadership on citizenship behaviours and deviance behaviours decreases.

As mentioned above, only one study was found that analyses the moderating impact of psychological distress on leadership and performance. The recent study by Roberge and Boudrias (2021) tested the relationship between empowering leadership and proactive performance moderated by employees' psychological strain. Psychological strain is defined as "the consequences of prolonged exposure to stress and includes symptoms such as anxiety, depression, and a sense of failure" (*ibid.*: 188). It is assumed that empowering leadership behaviour, particularly those providing autonomy, increase the responsibility of employees and thus the job-induced tension. The scholars argue that psychologically strained employees might be overwhelmed by additional autonomy. The results support this assumption, as the relationship between empowering leadership regarding autonomy and performance de-

creased in the presence of high psychological strain (*ibid.*: 192). However, empowering leadership concerning employees' development and performance was not moderated by psychological strain (*ibid.*: 186).

It can be concluded that more research is needed concerning the impact of psychological distress on leadership and performance. So far, only one leadership style has been studied in relation to psychological distress, which has proven to be less effective, namely empowering leadership (autonomy-oriented behaviour). Regarding the question which leadership styles enhance or help maintain performance given this situational variable, no studies could be found. Below, two tables are presented illustrating the less effective leadership style in context of psychological distress, as well as leadership styles that positively impact the performance and employee behaviour when moderated by positive well-being variables.

Table 10 Impact leadership style in the context of psychological distress

Leadership style	**Impact**	**Authors**
Empowering	Decreased relationship to performance when moderated by high psychological strain	Roberge & Boudrias (2021)

Table 11 Effective leadership styles in the context of well-being variables

Leadership style	**Impact**	**Authors**
Ethical	Positive impact on organizational citizenship behaviour, when follower self-esteem is low	Avey, Palanski & Walumbwa (2011)
Contingent Reward	Positive impact on resilient behaviour when moderated by optimism	Nguyen et al. (2016)
Transformational	Positive impact on employee performance, positively moderated by psychological Capital	Baig et al. (2021)

Based on the literature review, the following presuppositions can be derived:

III. Given the challenges, certain leadership styles and behaviours are more likely to positively affect performance.

a) *In face of changed working conditions, leadership behaviours that emphasize coordination, promote interaction and strengthen trust, positively impact performance.*

b) *In face of a virtual environment, transformational, transactional and directive leadership as well as leadership behaviours referenced in table 8 positively impact performance.*

c) *In face of employees' psychological distress, ethical leadership positively impacts performance, while the effect of empowering leadership on performance decreases.*

3. Research Method

3.1. Qualitative Content Analysis

The theoretical chapter shed a light on leadership and its relation to performance, as well as the impact that a crisis, particularly the current Covid-19 pandemic, can have on the relationship between the two variables. Three challenges caused by the current situation were identified: changed working conditions, virtual environment (specific, distinct working condition) and psychological distress.

The reasons for choosing a qualitative research method are twofold. Firstly, the researcher intends to examine in-depth the background and reasons for certain actions, behaviours and decisions. Thus, semi-structured interviews are conducted and only presuppositions are developed instead of hypotheses (Brüsemeister 2008: 24; Mayring 2014: 10). Secondly, a control group with pre-pandemic data would have been necessary in order to conduct a quantitative survey that would have allowed a verification or contradiction of theoretical statements (Brüsemeister 2008: 19ff.). Collecting the data retroactively is not possible. As the pandemic and the current challenges present a new phenomenon, previous studies cannot fully reflect the extent of the three challenges. Thus, the qualitative research of this thesis shall provide an insight into what challenges are present for different companies, how leaders handle these challenges and adapt their leadership styles according to the new demands. Lastly, it is reviewed how the leadership styles impact performance under the respective challenges.

Based on the theoretical review in chapter 2 three presuppositions were derived:

I. Leaders and their employees are frequently challenged by changed working conditions, a virtual environment and psychological distress due to the pandemic.

II. Leadership adaptations are required in order to cushion any negative and leverage possible positive effects on performance resulting from

a) *changed working conditions*
b) *a virtual environment*
c) *psychological distress*

III. Given the challenges, certain leadership styles and behaviours are more likely to positively affect performance.

a) *In face of changed working conditions, leadership behaviours that emphasize coordination, promote interaction and strengthen trust, positively impact performance.*

b) *In face of a virtual environment, transformational, transactional and directive leadership as well as leadership behaviours referenced in table 8 positively impact performance.*

c) *In face of employees' psychological distress, ethical leadership positively impacts performance, while the effect of empowering leadership on performance decreases.*

The expert interviews are examined by applying the qualitative content analysis. This method is often used to evaluate semi-structured interviews with experts, as it facilitates an analysis and interpretation of the gathered material based on theory (Mayring 2010: 13). The analysis is based on two pillars, the *deductive category formation* and the *summarizing content analysis*. Firstly, a category system is derived providing a central element of the analysis, as it is a systemic approach to derive comparable results. Thus, it guarantees intersubjectivity and prevents bias (Mayring 2010: 49). This procedure includes that "[a]ll text components addressed by the categories are […] extracted from the material systematically" (Mayring 2014: 95). The *deductive category assignment* follows seven steps in total. Central to this procedure are the definition of categories, extraction of anchor samples and the development of coding rules.

The table below shows the derived category system. The definition of the categories follows the theoretical outline of chapter 2. Thus, in total, six main categories were developed. Following definitions of the categories, anchor samples and coding rules are outlined.

Table 12 Developed category system

Main category	Subcategory	Abbreviations	Question
General Questions Leadership	Number of employees	A1	1a
	Leadership style	A2	1b
	Leadership styles and performance	A3	1d
Crises and Covid-19	Impact crises on leadership and performance	B1	2a
	Changes and measures	B2	2b, 2c
	Connection between Covid-19 and three challenges (W.C, V.E, P.D)	B3	3.1a, 3.2a, 3.3a
Theoretical Understanding	Role of situation in leadership	C1	1c, 3a
Working Conditions (W.C)	W.C Impact on working situation	D1	3.1b
	W.C Adaptation leadership style	D2	3.1c
	W.C Effects leadership on performance	D3	3.1d
Virtual Environment (V.E)	V.E Impact on working situation	E1	3.2b
	V.E Adaptation leadership style	E2	3.2c
	V.E Effects leadership on performance	E3	3.2d
Psychological Distress (P.D)	P.D Impact on working situation	F1	3.3b
	P.D Adaptation leadership style	F2	3.3c
	P.D Effects leadership on performance	F3	3.3d

The first category, *General Leadership Questions,* includes three subcategories, which relate to the number of subordinates supervised, the use of leadership styles and the perceived impact of leadership styles on subordinate performance. This is intended to provide a basis for analysing how leaders adapt their styles due to current situational challenges. Chapter 2.1.2 and 2.1.3 form the theoretical basis for this category.

The second category, *Crises and Covid-19 pandemic,* consists of three subcategories that refer to, for one, the impact different crises have on leadership and performance. Secondly, it contains information about how the Covid-19 pandemic generally impacts the work situation and what measures are and were taken consequently. Thirdly, the connection between the Covid-19 pandemic and the three challenges (working conditions, virtual environment, psy-

chological distress) is determined. The theoretical basis of this category is chapter 2.2.2 and 2.3.1.

The third category, *Theoretical Understanding,* analyses the understanding of leadership concerning the role of situation in leadership and whether leaders adapt to situational demands, requirements etc. The theoretical basis of this category is chapter 2.1.1.

The categories four to six (*Working Conditions, Virtual Environment, Psychological Distress*) have the same structure. In each of these categories we analyse how the respective challenge affects the working situation. The second part examines whether or to what extent the leaders adapt their leadership style accordingly. Finally, the impact of leadership on performance under the respective challenge is reviewed. Regarding the changed working conditions mainly temporal and spatial limitations and flexibility are considered including, for instance, short-time work, homeschooling and a possible blurring of boundaries between private and professional lives. In respect to the virtual environment, various problems are taken into account, for instance, Internet problems, the conversion to and usage of digital communication tools and a lack of face-to-face interaction between the leader and the subordinates. Lastly, concerning psychological distress, signs or higher levels of e.g., frustration, fear, depression and anxiety, are included.

Following anchor samples and coding rules are presented for each subcategory. Most interviews were conducted in German, in order to maintain a consistent language, only excerpts from the interviews conducted in English are used.

Table 13 Anchor samples and coding rules

Subcategory	**Anchor sample**	**Coding rule**
A1	"It is roughly 50 people" (R8: Nr.1)	Exact or approximate number of employees to be supervised
A2	"[…] I think a combination of transformational and participative leadership styles […]" (R2: Nr.2)	Description of leadership style and leadership elements
A3	"It does (...) to a good proportion. […]" (R8: Nr.3)	Impact leadership (style) on performance; special emphasis on certain leadership elements
B1	"Back in 2008, I was working to a bank in Brazil and the crisis hit us hard at that time because especially it was a bank, and it was in Brazil […]." (R6: Nr.4)	Effects of previous crises and/ or the current pandemic on leadership and performance
B2	"The team works remotely from home for one and a half years now" (R2: Nr.6)	Changes for the team or company due to Covid-19; introduction of measures
B3	"Working remotely from home as well as limited travelling are challenges that are present for the com-	Naming the three aspects (working conditions, virtual environment, psychological distress) as a chal-

	pany […].” (R2: Nr.8)	lenge posed by the Covid-19 pandemic
C1	“The times are over that you just use one leadership style. […]” (R8: Nr.7)	Theoretical understanding of leadership and the element of situation; examples; other leadership theories
D1	“Many processes are nowadays more efficient than pre-Covid, for instance coordination, standard tasks and standard processes […].” (R2: Nr.11)	Impact of changed working conditions on working situation
D2	“No sure, that was kind of that is part of those (...) why listening to the people is so important because you need to understand the family situation of a person. […]” (R8: Nr.11).	Adaptation of leadership style or leadership elements in the context of changed working conditions
D3	I think definitely that whole flexibility topic has a quite positive impact on a team because so most of the team members are glad that they can organize themselves and also make it fit to their other part of life […]. (R2: Nr.13).	Impact leadership style on performance in the context of changed working conditions
E1	“I think one challenge is this: you need to protect the people from burning out, sitting like 10 or 12 hours in front of an MS Teams call […].” (R2: Nr.14)	Impact of virtual environment on working situation
E2	“It is also an opportunity to step back and to listen more to others. I think especially what is important, actually that helps is when there are virtual meetings, I really want to make sure that everybody is heard.” (R8: Nr.17)	Adaptation leadership style or leadership elements in the context of virtual environment
E3	“So, I think this is the way of trying to increase the performance or the productivity in terms of really building a conditional framework that works for the team as a whole.” (R2: Nr.17)	Impact leadership style on performance in the context of virtual environment
F1	“I can give you example of one off the engineers that does not like the winter. So, I can see his performance going down on winters and it happens to some other team members as well. Not only the winter, but the guy that was locked at home without his girlfriend. I need to approach him a little bit more than the other.” (R6: Nr.24)	Impact of psychological distress on working situation and performance
F2	“The they did not need me to do anything for them, so they are able to finish their work. They were self-managed per se. By the end of the year, I had to be a little bit bossy and start drilling down on what the guys were doing, because the delivery was not so great anymore.” (R6: Nr.27)	Adaptation leadership style or leadership elements in context of psychologically distressed employees
F3	“My personal approach is always to avoid the underperformance and not having the performance back again. Recovering, I do not see my leadership style actually helping on recovering, but on keeping the high performance.” (R6: Nr.22).	Impact leadership style on performance in context of higher psychological distress

Following the category formation, the *summarizing content analysis* is conducted. This process serves to reduce the material to essential statements. This procedure is based on four steps. In the first step, the statements are paraphrased to eliminate repetition and to transform

the content to one coherent level of language. The second step is the *generalization*. The previously paraphrased statements are generalized to a defined level of abstraction. The third step is called *first reduction*. In this process paraphrased statements that are not considered relevant on the new level of abstraction are erased. Additionally, semantically identical statements are summarized. Lastly, the fourth step – *second reduction* - includes a grouping, binding and integration of similar statements into one paraphrase. Hence, paraphrases with multiple propositions are cumulated (Mayring 2010: 70; Mayring 2014: 66f.). The tables of the *summarizing content analysis* can be found in the Appendix (7-16).

The transcription of the interviews follows the rules of Dresing and Pehl (2018). For the purpose of this thesis, the content-semantic transcription was chosen, which consists of 15 rules. This includes, for example, that aborted words as well as recession signals are ignored. For further information, see Dresing und Pehl (2018: 21f.).

3.2. Sampling and Setting

The researcher follows a "four-point approach to qualitative sampling" (Robinson 2014: 26). The first step is called *Defining a Sample Universe*, which means that inclusion as well as exclusion criteria must be developed. Based on the theoretical basis of this thesis, the inclusion criteria for the sample universe are defined as leaders in organizations, independent of the hierarchical level or specific function. The focus is on the personnel responsibility, regardless of how many employees are subject to the direct management area. The exclusion criteria are defined as leaders who work in companies that had to close their operations for several weeks or month during the pandemic, e.g., the hotel industry.

In the second step, the sample size is defined. This procedure is bound to theoretical as well as practical conditions (Robinson 2014: 29). The study has an idiographic purpose, meaning that the sample size should allow for an in-depth analysis of each individual interview. The benchmark for comparable studies is 3-16 participants (Robinson 2014: 29). Considering the scope of this work, as well as the efforts to find suitable candidates, the final number of participants was ten.

The third step requires finding an appropriate sampling strategy. For this purpose, a non-probability sampling technique was applied, called *purposive sampling*. This method is used when "the researcher assumes, based on their *a-priori* theoretical understanding of the topic being studied, that certain categories of individuals may have a unique, different or important perspective on the phenomenon in question" (Robinson 2014: 32). The candidates

selected for this study have specific experience regarding the impact of the Covid-19 crisis on leadership and performance.

The last step of this procedure refers to the recruitment of participants. At the beginning of this process, leaders from the own personal as well as professional network were contacted. Moreover, acquaintances reached out to their professional contacts to help the researcher's aim of finding suitable interview partners. No financial incentives were offered. Additionally, a so-called *snowball sampling strategy* was used, i.e., in two cases participants offered to ask other leaders within their company if they wanted to participate (Robinson 2014: 37). This means that of the ten interviewees, in two cases two leaders work in the same company but different departments.

When contacting potential interview partners, the researcher provided information regarding the context and purpose of this study as well as an outline of the process. Following, if interviewees agreed to participate, the researcher sent the interview questions, an overview of different leadership styles, a participant information and consent form (Appendix 1-6). The brief overview of different leadership styles refers to the styles defined in chapter 2.1.2 and has been sent out so that leaders could look at the definitions in advance and reflect on which leadership styles they apply themselves. The participants could choose whether they wanted to conduct the interview in English or German. The documents were sent by email in the respective language.

The participant information and declaration of consent form provide detailed information regarding the protection of anonymity and the voluntary nature of this study. Moreover, it is clearly stated that the interviews will be recorded to enable transcription of the data for analysis. In all cases, the consent form was signed before the interview was conducted.

The sample of this study comprises ten leaders, six of them working in companies in Germany, three in Austria and one in the United States. The range of the companies includes small and medium-sized, as well as large, listed companies. All companies work in different industries.

The interviews were conducted virtually using the communication platforms Microsoft Teams, Zoom and Google Duo. The duration of the interviews ranged from 18 minutes to 74 minutes. On average, the interviews lasted approximately 40 minutes. A total of seven interviews were conducted in German and three in English. Independently, the data was analysed in English. In eight out of ten cases, the interviewee and interviewer were on first-name

terms, either because of personal acquaintance or at the interviewee's request. In the following, for the sake of anonymity, the respondents are abbreviated as R1-10.

3.3. Interview Guideline

The interview guideline illustrates the theoretical basis of this thesis and aims at finding answers to the developed research questions. The semi-structured interview design was chosen because it allows most of the questions that are crucial for answering the research question to be defined in advance, while at the same time allowing a flexible approach during the interview. As mentioned above, the questions were given to the interviewees prior to the interview. This served the purpose of allowing leaders to deal with the topic in advance and therefore to be able to give reflective answers during the interview. The interview guideline is reflected in the deductively developed category system in the further course of analysis.

The interviews follow the research questions, which are:

1. How does the Covid-19 pandemic impact the relation between leadership and performance?

2. What leadership styles/behaviours have a positive impact on performance given

a) the challenges related to the changed working conditions caused by Covid-19?

b) the challenges related to the virtual environment caused by Covid-19?

c) the challenges related to the subordinates' psychological well-being during Covid-19?

The interview guideline therefore comprises six main categories, which were presented in the previous chapter. The first category aims at gathering general leadership information in order to establish the leader's general perception about applied leadership styles and its relation to subordinate performance. The second category is dedicated to the impact crises have on leadership and performance as well as the specific implications of the current Covid-19 pandemic including the connection between the pandemic and the three challenges illustrated in chapter 2.2.2. The third category is concerned with the theoretical understanding of leadership.

The first three categories build the basis for the subsequent three categories. The fourth to sixth category are all structured in the same way and only differ in terms of the specific challenge posed by the pandemic. In each case we review, how the specific challenge influences the work situation, what, if any, adaptations have been made to the leadership style and how

leadership under this specific challenge influences performance. The interview guideline in English and German are listed in the Appendix (1, 2).

4. Results

4.1. Category A: General Leadership Questions

Number of employees

To gain an understanding about their respective general leadership situation, the respondents were asked how many subordinates they oversee. The smallest team comprises two subordinates (R4: Nr.1), followed by three employees (R3: Nr.1), then four leaders, each supervising seven employees (R2: Nr.1; R5: Nr.1; R6: Nr.1; R8: Nr.1). However, R5 supervises seven executives himself directly, which is why the total number of subordinates is seventy. The same applies for R8 who directly oversees seven executives as well as a total of fifty employees (Nr.1,2). The respondent R9 currently manages 35 to 36 subordinates (Nr.1) while R10 supervises approximately 40 employees and R7 leads 45 employees (Nr.1). Lastly, R1 oversees a total of 200 to 210 subordinates (Nr.1). All management levels (lower, middle, top) are represented.

Table 14 Number of employees supervised by respondents

Respondent	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Number employees	200-210	7	3	2	7	7	45	7	35-36	40

Leadership style

As mentioned in the previous chapter, the respondents were given a short overview of leadership style definitions as described in chapter 2.1.2. All interviewed experts agree that not one of the definitions accurately describes their leadership style but that different elements of various leadership styles are used (R1: Nr.2; R10: Nr.2).

The transformational style is the most frequently mentioned leadership style (R2: Nr.2; R4: Nr.2; R5: Nr.2; R7: Nr.2) followed by the participative (R2: Nr.2; R5: Nr.2) and the empowering ones (R5: Nr.2; R8: Nr.2). The application of transactional leadership is directly mentioned by one leader (R4: Nr.2). Two respondents refer to their leadership styles as relaxed

(R3: Nr.2; R9: Nr.2) while two other interviewees describe their style as team-oriented (R1: Nr.2; R10: Nr.2).

Table 15 Leadership styles mentioned by respondents

Respondent / **Leadership style**	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Transformational		X		X	X		X			
Transactional				X						
Ethical										
Empowering					X			X		
Participative		X			X					
Directive										

Marking "X" if mentioned by respondent

Moreover, various leadership elements are covered. This includes motivation (R1: Nr.2; R4: Nr.2), role modelling (R1: Nr.2, R7: Nr.2), communication (R1: Nr.2), inspiration (R6: Nr.2), trust in terms of freedom and flexibility (R3: Nr.2), coaching, mentoring and developing (R2: Nr.2, R4: Nr.2; R5: Nr.2; R6: Nr.2; R10: Nr.2), support (R6: Nr.2), social and professional competence (R1: Nr.2), team-orientation (R1: Nr.2; R10: Nr.2), close interaction (R6: Nr. 2), supervision, direct instructions and delegation (R4: Nr.2; R8: Nr.2; R10: Nr.2) and active control and monitoring (R4: Nr.2; R9: Nr.2).

Table 16 Leadership behaviours mentioned by respondents

Respondent / **Leadership behaviour**	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Motivation	X			X						
Role modelling	X						X			
Trust			X							
Inspiration						X				
Communication	X									
Coaching, mentoring		X		X	X	X				X
Support						X				
Social, professional competence	X									
Team-orientation	X									X
Close interaction						X				
Supervision, directive instructions				X				X		X
Active control, monitoring				X					X	

Marking "X" if mentioned by respondent

Leadership style and performance

The perception regarding the impact of leadership styles on performance varies among the respondents. While all experts agree that their personal leadership impacts subordinate performance (R3: Nr.3; R4: Nr.3; R5: Nr.3), each respondent places an emphasis on different elements of leadership behaviours that enhance performance.

R2, for instance, argues that communicating a purpose, setting a clear framework, targets and individual roles as well as supporting subordinates is crucial to increase performance (Nr.3). Yet, R2 indicates that motivating the team is not necessary, given that the respective subordinates are highly motivated already. In contrast, R1 emphasizes the importance of motivational leadership, which supposedly enhances productivity and efficiency through autonomy and enjoyment of the work (Nr.3).

R1 clearly states that rather hierarchical leadership styles with directive instructions fail to exploit the full potential of subordinates (Nr.3). This goes hand and in hand with a statement by leader R5 who does not specifically refer to certain leadership elements but highlights the importance of a potential-oriented approach. This implies the opinion that a short-term perspective on performance is insufficient, and that a leader should focus on the subordinates' potential, meaning the possible increase in performance in the future (*ibid*.: Nr.3).

This is consistent with the assumptions of R8 and R4, both of which find that leadership promoting empowerment and encouragement increases performance (R8: Nr.3; R4: Nr.3). Furthermore, R8 and R6 agree with the statement by R2 that support plays an essential role, particularly in terms of actively listening to subordinates' needs, helping to prioritize tasks (R8: Nr.3) and developing skills (R6: Nr.2). Similarly, R3 explains that subordinate feedback reflected that trust, freedom and flexibility have positive effects on performance (Nr.3). The leader R10 emphasizes that if employees are given the opportunity to contribute creatively with ideas and to participate in decision-making processes, overall their performance increases (Nr.3).

Moreover, R6 feels that close interaction with subordinates and inspiration positively contributes to overall performance (Nr.2). Another aspect that is assumed to have an impact is a positive work environment in which employees feel comfortable, make positive experiences and are treated well by their leader (R4: Nr.3; R7: Nr.3). A similar assessment by R10 suggests that a reciprocal relationship between employees and leader enhances performance, as employees in these instances improve their performance for the leader as well as for the

company (Nr.3). The interviewee R9 argues that teaching values, specifically respectful interaction, improves collaboration which ultimately enhances performance (Nr.3).

4.2. Category B: Crises and Covid-19

Impact crises on leadership and performance

Following, the leaders were asked how they interpreted the impact crises have on leadership and performance. This could be either discussed in the context of the current Covid-19 crisis or looking back on previous events such as the financial crisis of 2007/2008.

The experts R1 and R4 both provide similar perspectives on this matter. Both respondents argue that sharing information and increasing communication to explain the purpose of certain measures is crucial and can positively impact motivation and performance (R1: Nr.4; R4: Nr.4). The interviewee R4 explains that tension in the work environment negatively impacts performance and that the mutual influence between performance, motivation and environment should not be underestimated. Thus, ensuring subordinates' motivation is crucial (*ibid*.: Nr.4). R1 adds social competence and organizational skills to the leadership elements that should be strengthened during a crisis to help stabilize or even enhance performance. Moreover, the leader stresses the necessity to tailor the crisis response to the respective area (e.g., production, administration) (*ibid*.: Nr.4).

R4 as well as R6 talk about the impact of downsizing as a measure in crises. R4 states that performance does decrease consequently. Both interviewees claim that inspiring the remaining employees is therefore essential (R4: Nr.4; R6: Nr.3). One variation on how R6 supposedly tried to accomplish this in 2008 during the financial crises was to lead by example (Nr.3).

R2 observes that crises can have positive short and long-term effects on performance. In the short-term, companies and leaders are forced to focus on core targets, while in the long-term, crises can help reveal redundant elements that can consequently be eliminated. Regarding leadership during crises, R2 is of the opinion that rather directive styles are used in terms of high levels of control, clear goals and allocating tasks and resources. Moreover, most decisions are made at the top management level during such uncertain times (*ibid*.: Nr.4,5).

In addition, R5 states that mistakes made in crises weigh more heavily, because crises are defined by high pressure and a lack of time. Yet, this can present an opportunity to improve

leadership as fast decision-making is required and learning effects can be generated (*ibid*.: Nr.4). Both R5 and R8 agree that during crises situations, differences between good and bad leaders become even more apparent (R5: Nr.4; R8: Nr.5). Thus, R8 claims that "strong, authentic leadership is a good enabler to manoeuvre through such a difficult situation" (*ibid*.: Nr.5), particularly if leaders are self-aware and lead actively.

Concerning the effects of the current pandemic on leadership and performance, R3 mentions that a certain distance developed between the leader and the subordinates. The leader has not yet met one of the subordinates personally. Thus, for employees to achieve an understanding about the leadership style is currently difficult. However, no negative performance effects were observed during the crisis (*ibid.*: Nr.4).

R6 admits that the Covid-19 pandemic contradicts the previously manifested leadership style, which is usually based on close interactions. Due to social distancing and the virtual environment, it has become increasingly difficult to identify and react to problems (*ibid*.: Nr.4). Moreover, R7 has noticed strong differences among employees regarding the handling of the pandemic situation. While some employees have never used the option of working from home, others have supposedly accused the company of putting their families at risk when asking employees to work in the office. According to R7, performance has decreased due to a lack of control (Nr.4). Contrarily, R9 states that less control had to be exercised by leaders, as the respective employees were very reliable. Yet, R9 confirms that the attitude and basic mood of employees is currently challenging as everyone faces different fears. This has required the leader to take on the role of a therapist and conversation partner. Hence, even though the crisis has not impacted the company per se, the interviewee R9 argues that the crisis has had a general debilitating effect (Nr.5).

Changes and measures

Following the changes that have occurred in the different companies and teams due to the pandemic are presented as well as measures that have been implemented to adapt to the new circumstances. As many interviewees refer to similar changes and measures, two short tables are presented to provide a clear overview.

Table 17 Reported changes due to the pandemic

Respondent / **Changes**	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Increase coordination and planning of meetings	X	X								
Increase number of meetings			X							
Mainly usage of digital communication tools	X	X	X	X	X	X	X	X		
No or reduced number on-site meetings				X	X					
Shift working hours							X			

Changes that are most often referred to revolve around the usage of mainly digital communication tools (R1: Nr.5; R2: Nr.6; R3: Nr.5,7; R4: Nr.6; R5: Nr.5; R6: Nr.5; R7: Nr.5; R8: Nr.6), an increase in the number of meetings as well as an increased effort regarding the coordination and planning of meetings (R1: Nr.5; R2: Nr.6; R3: Nr.5,7). Moreover, R4 explains that currently, an on-site meeting is only held once a month, while R5 mentions that the last on-site meeting took place before the pandemic (R4: Nr.5; R5: Nr.5). This might also be due to the team being located in three different European cities. R7 adds that the working hours have shifted due to the pandemic situation (Nr.6).

It should be noted, at this point, that each leader focused on particular changes and may not have mentioned all changes in the company or team. The same applies for the following measures.

Table 18 Implemented measures due to the pandemic

Respondent / Measures	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Short-time work	X	X	X		X	X	X			
Working from home	X	X	X	X	X	X	X	X		
Continuously providing information	X									X
Providing disinfectants, mandatory masks									X	X
Providing vaccination							X			
Avoidance customer contact									X	
Installing air filter, moving breakout room									X	
Downsizing						X				
Restructuring, health management					X					
Timeouts, strengthening resilience, promoting disconnecting					X					
Strict cost management, adapting the planning of merchandise purchases		X								

The table shows that the most frequently applied measures are short-time work and working from home. In total, six interviewees name short-time work as a measure taken in their company, even though it does not necessarily apply to the respective team or subordinates (R1: Nr.4,5; R2: Nr.7; R3: Nr.6; R5: Nr.5; R6: Nr.5; R7: Nr.7). The expert R3's team supposedly worked in a short-time work regime during two weeks in 2020. Thus, the effects are negligible (*ibid.*: Nr.6).

Regarding the measure working from home, only two interviewees do not name this measure (R1: Nr.5; R2: Nr.6; R3: Nr.5,7; R4: Nr.7; R5: Nr.5; R6: Nr.5; R7: Nr.5; R8: Nr.6). In the further course of the interviews, it was confirmed that this has not been implemented in their companies or in their respective teams. However, as the table shows, R9 and R10 both refer to several measures that have been taken over the course of the pandemic, including: the provision of disinfectants, mandatory masks, avoidance of customer contact, the installation of air filters in the office and moving the breakout room to a hall (R9: Nr.6; R10: Nr.6).

Additionally, several measures, each mentioned by only one respondent, include: downsizing, provision of vaccination early in May 2021, restructuring, managing the health management, strict cost management and adapted planning of merchandise purchasing (R2: Nr.7;

R5: Nr.5; R6: Nr.6; R7: Nr.5). The expert R5 has supposedly implemented measures to specifically counteract the risk of burnouts, such as timeouts, strengthening employee resilience and promoting employees to disconnect from work (Nr.6).

Beyond the changes and actions taken, some respondents cite additional impacts. R4, for instance, notices that the elimination of the commute has created additional time to work, which has ultimately increased efficiency (Nr.8). However, as a consequence of working from home, R3 states that quick conversations with colleagues, as they used to take place in the hallway or at the desk, are currently non-existent (Nr.5).

Similarly, R6 argues that while the technical prerequisites to work from home have been given, the cultural prerequisites had been missing and had to be developed simultaneously with the conversion (Nr.5). Moreover, the new working situation has required an adaptation regarding team building and the organization of work (R2: Nr.6). The leader R5 emphasizes that the team is considerably overworked, as there are few recovery phases (Nr.5). Another aspect mentioned by two interviewees is the challenge referring to different opinions and attitudes towards the Covid-19 pandemic (R9: Nr.5; R10: Nr.5,6). These differences cause friction between employees, even leading up to bullying (R10: Nr.5).

In addition, R8 talks about other events and crises currently taking place in the United States aside from the pandemic, ranging from wildfires to the drought to the Black Lives Matter movement in response to the assassination of George Floyd in 2020, and the political crisis. All these events and crises frighten employees, making it important to connect with them on a personal level before diving into a subject matter in turn. Consequently, R8 supposedly starts every meeting with questions concerning the individual well-being (Nr.6).

Connection between Covid-19 and three challenges (W.C., V.E., P.D.)

This subcategory addresses if the three challenges previously discussed (changed working conditions, virtual environment, and psychological distress) are caused by the pandemic and are present for the leaders and their respective teams. The table below provides an overview by marking what challenges impact the respective leaders.

Table 19 Changed working conditions, virtual environment and psychological distress as challenges created by the pandemic

Respondent / **Challenge**	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Working conditions	X	X	X	X	X	X	X	X	X	X
Virtual environment	X	X	X	X	X	X	X	X		
Psychological distress	X				X	X	X	X	X	

Marking "X" if challenge is present for respective respondent

The results show that changed working conditions, due to the current crisis, are present for each of the ten respondents. Yet, the changed working conditions entail different aspects such as short-time work (R1: Nr.6; R5: Nr.7; R6: Nr.8), homeschooling and childcare during working hours (R1: Nr.6; R2: Nr.8; R3: Nr.8; R5: Nr.7; R6: Nr.7; R9: Nr.8; R10: Nr.7), limited business travel (R2: Nr.8), blurring boundaries between personal and professional lives (R2: Nr.8; R3: Nr.8; R4: Nr.10), sanitary restrictions (R6: Nr.9; R7: Nr.8; R8: Nr.8; R10: Nr.7), lack of appropriate equipment while working from home (R6: Nr.10), working longer hours (R8: Nr.7) and spatial distance within the office (R6: Nr.9; R9: Nr.8, R10: Nr.7).

As table 19 depicts, the virtual work environment impacts eight among the ten respondents (R1: Nr.7; R2: Nr.9; R3: Nr.9; R4: Nr.11; R5: Nr.8; R6: Nr.11; R7: Nr.9; R8: Nr.9). In the timeframe that the interviews were conducted (August until mid-September), most respondents were still working predominantly remotely. However, for the respondents R9 and R10, the virtual environment is not a challenge, because the leaders and their respective subordinates are not working from home.

Regarding the challenge of psychological distress, six out of ten respondents claim that higher levels of stress, depression, fear and anxiety are present due to the Covid-19 pandemic. The leaders have either noticed these effects themselves or have been informed by their employees about respective struggles (R1: Nr.8; R5: Nr.9; R6: Nr.12; R7: Nr.10; R8: Nr.10; R9: Nr.10).

This subcategory has established that the three determined changes and challenges are caused by the Covid-19 pandemic and are frequently occurring for leaders and their subordinates. Thus, *presupposition I* is partially confirmed, as not all challenges apply equally to all interviewed leaders. In category 4 to 6, the impact of the challenges as well as the handling of the situational demands are summarized.

4.3. Category C: Theoretical Understanding

This category refers to the theoretical understanding of leadership. The interviewees were asked whether they think it is necessary to adapt leadership to situational demands. Before going into detail, it can be stated that all respondents agree with the *Situational Approach*, or more specifically the assumption of the *Contingency Theories*.

R1 declares that it is not the leadership style itself that changes, but rather that certain elements such as communication or motivation are adapted or reinforced, depending on the situational demands. This includes, for instance, new tasks or crisis situations. Regarding short-time work, directive instructions for actions have, for example, been necessary (*ibid*.: Nr.9,10). The interviewee R2 agrees that the pandemic illustrates the need to adapt quickly. To ensure efficiency regarding the company's core activities, a more directive approach is needed. Other situations require more motivation and encouragement to foster a growth mind-set (*ibid*.: Nr.12).

R8 also refers to the pandemic as a situational example that calls for a leadership adaptation. The leader explicates that active listening, demonstrating sincere interest and understanding for individual situations is currently essential. The interpersonal component has become stronger. In general, the two experts R8 and R10 mention the need to adapt to production and time pressures. Thus, in certain crises situations, the democratic approach would be inefficient as it requires (too much) time (R8: Nr.11,12; R10: Nr.10). Notwithstanding, R8 claims that the vision and long-term goals should always be considered, meaning, "adaptive leadership style shall not be […] confused with […] a flag in the wind" (*ibid*.: Nr.12).

R7 chooses similar examples. When operations run smoothly, a laissez-faire approach can be taken, including a friendly relationship with subordinates. Yet, during particularly stressful situations, the leader must approach the situation more directly by giving clear directions and instructions (*ibid*.: Nr.11).

Similarly, R4 argues that the leadership style itself is internalized, but that it is adapted depending on each occurring situation. The leader also names new tasks as well as restructurings and top-down decisions as examples for situational demands that require an adaptation. When implementing top-down decisions, the leader must take a more directive approach, while new tasks would require more support and supervision (*ibid.*: Nr.13).

R3 and R5 both cite deadlines as examples that require more oversight by ensuring that tasks are fulfilled (R3: Nr.13). The shared opinion is that deadlines do not leave room for democratic discussion. The leader R5 argues that in some cases, this can in fact unburden employees because they are relieved of decision-making responsibilities (Nr.10,12).

R6 who, in general, uses a leadership style that is supposedly characterised by humour, positivity and close interactions, states that in some situations, a more directive approach is needed. The leader claims that "you can benefit from having some different approach[es] and showing this capability is a strength" (*ibid.*: Nr.16).

Overall, it must be noted that six of the respondents consider the adaptation to individual employees and their needs to be at least as important, if not more important, than the adaptation to situational conditions (R3:14; R9: Nr.11; R10: Nr.10). The interviewee R3 mentions that situational variables are not sufficient and that some situational changes might not require an adaptation, but that the style must rather be tailored to the subordinates individually (Nr.14).

R5 explains that each context, topic, experience and individual role must be taken into account. Moreover, two leaders say that a directive style or direct instructions are needed if employees deviate, including clear instructions and occasional penalties (R5: Nr.10, R10: Nr.10). Rather insecure subordinates, on the other hand, might need clear solutions outlined by the leader. R6 in this sense supposedly provides some subordinates with more attention and patience and allows others more freedom and self-management, always depending on individual needs (Nr.15).

4.4. Category D: Working Conditions

W.C Impact working situation

The impact of changed working conditions on the working situation varies according to the different experts. The respondent R9 and R7 emphasize the difficulties regarding the varying handling and attitudes towards the Covid-19 pandemic. The respondent R7, for instance, supposedly terminated employees. According to the interviewee, some subordinates refused to work from the office because of a fear of infection but posted pictures on social media showing them in bars. This damaged the employment relationship to a point that the leader R7 terminated said employees (Nr.13).

Other difficulties refer to developing team spirit, aligning on specific topics, communicating effectively, maintaining interpersonal relationships, and fostering creativity and innovation while being spatially distant. However, coordination and exercising standard tasks has become more efficient (R2: Nr.13). The leader R1 even reports that performance increase while employees are working from home (Nr.11). Yet, due to the blurring of boundaries, employees are tempted to work longer hours (R3: Nr.15; R8: Nr.13).

Furthermore, reachability and availability have changed due to varying working hours, either because of short-time work or due to childcare responsibilities during the closure of schools and kindergartens (R4: Nr.15; R6: Nr.17). The interviewee R5 concludes that challenges, whether personal (e.g., childcare) or professional (e.g., working conditions), have skyrocketed and negatively impacted the overall working situation (Nr.13).

International companies and teams are particularly affected by travel restrictions. R2 mentions that prior to the pandemic, monthly meetings were held across organizational teams. The travel restrictions have thus ultimately increased the distance between subsidiaries (Nr.13). Interviewee R5, regarding the changes due to the Covid-19 crisis, also states in category B2 that the team is located in different European cities and that pre-pandemic, in person meetings usually (pre-Covid) took place. However, the leader does not explicitly state if or to which extent the distance has in fact increased (*ibid*.: Nr.7).

Another point raised, by R10, concerns hygiene conditions in the plant, in particular the requirement to wear masks. Since the temperature in production is never below 36 degrees, wearing masks is a physical burden for employees that must be acknowledged as such (*ibid*.: Nr.12). Another aspect that has impacted the physical well-being while working is addressed

by R6. While the team has worked from home, employees have experienced severe back pain, because they had not been equipped with appropriate desk chairs (*ibid.*: Nr.17).

Table 20 Impact of changed working conditions on working situation

Changed condition	**Impact**	**Referenced by**
Varying working hours	Changed reachability and availability	R4 (Nr.15), R6 (Nr.17)
Working spatially distant (office, home, travel restrictions)	Lack of information transfer	R9 (Nr.13)
	More efficient coordination and exercise of standard tasks	R2 (Nr.13)
	Difficult to: Develop team spirit, align on specific topics, communicate effectively, maintain interpersonal relationships, foster innovation and creativity	R2 (Nr.13)
	Performance increase	R1 (Nr.11)
	Increased distance between subsidiaries	R2 (Nr.13)
Hygiene measures	Physical well-being/ stress	R10 (Nr.12)
No appropriate chairs		R6 (Nr.17)
Blurring boundaries	Temptation to work longer hours	R3 (Nr.15)
No commute		R8 (Nr.13)
Attitudes towards pandemic	Termination due to decreased performance	R7 (Nr.13)

W.C Adaptation leadership style

When asked if the respondents have adapted their leadership style in order to address the challenges related to the adapted working conditions, six respondents mention the increase of particularly temporal flexibility that allows employees to schedule their working hours depending on their personal needs (R1: Nr.11; R2: Nr.15; R3: Nr.16; R6: Nr.19; R8: Nr.14; R10: Nr.12). The interviewee R3 elaborates that previous consultation about changes in the working hours is necessary to avoid any and all misunderstandings (Nr.16).

The second aspect that is reported by several interviewees is that the leaders increasingly listen to their subordinates' needs and acknowledge their individual challenges. This form of support and empathy is referred to as an increase of social competence (R1: Nr.12), actively listening to subordinate needs (R5: Nr.14; R8: Nr.14), showing compassion and vulnerability (R8: Nr.15) or using positivity, humour and the video function to demonstrate visibility and uplift the respective team's spirit (R6: Nr.20).

The respondent R2 moreover states that while communication has increased, upholding the team spirit and employee motivation is still problematic (Nr.15). Furthermore, the interview-

ee R1 specifies that employees' professional competence has increased due to more problem- and solution-oriented actions (Nr.12). Other leadership adaptations that are mentioned are: adapting and reducing the content agenda, recommending employees to take time off by reducing overtime, for instance, strengthening employees' resilience (R5: Nr.14) and role modelling (R6: Nr.20). The results therefore provide evidence to support *presupposition IIa.*

Table 21 Leadership style adaptation in the context of changed working conditions

Leadership adaptation	**Referenced by**
Increasing temporal flexibility	R1 (Nr.11), R2 (Nr.15), R3 (Nr.16), R6 (Nr.19), R8 (Nr.14), R10 (Nr.12)
Increased usage of empathy, support	R1 (Nr.12), R5 (Nr.14); R8 (Nr.14,15)
Increasing communication	R2 (Nr.15)
Increased usage of positivity and humour	R6 (Nr.20)
Adapting content agenda	R5 (Nr.14)
Recommending reduce of overtime	R5 (Nr.14)
Strengthening resilience	R5 (Nr.14)
Role modelling	R6 (Nr.20)

W.C Impact leadership on performance

Overall, most leaders report a positive impact of different leadership elements on performance in face of changed working conditions. R1 observes that in production, a clear and constant stream of communication has increased productivity. In administration, performance has increased due to the temporal flexibility while working from home (*ibid.*: Nr.13). Other respondents confirm that granting (temporal) flexibility, and with that the appreciation of subordinates to be able to schedule their work depending on their own individual needs, has been reciprocated by higher performance (R2: Nr.16; R3: Nr.17; R10: Nr.13).

Other leadership factors, such as setting clear targets, task planning, task and role clarity as well as efficient coordination have also positively impacted performance. However, R2 argues that interpersonal interaction as well as a shared team spirit are missing, but do not yet impact performance negatively (Nr.16).

R5 emphasizes that the trust between leader and subordinates has increased and that employees now notice and appreciate the empathetic handling and the consideration of their individual needs. This appreciation is reciprocated with increased loyalty. Performance has thus improved because of the closer trust relationship (*ibid.*: Nr. 15).

The respondent R4 also reports a positive impact of leadership on performance in context of the changed working conditions. However, the interviewee does not provide more details. It needs to be considered that only six of the ten leaders responded to this specific question.

With regard to *presupposition IIIa*, conclusions are drawn in chapter 5.

Table 22 Impact leadership on performance in the context of changed working conditions

Leadership	**Impact performance**	**Referenced by**
Clear communication	+	R1 (Nr.13)
Granting (temporal) flexibility	+	R1 (Nr.13), R2 (Nr.16), R3 (Nr.17), R10 (Nr.13)
Setting clear targets and tasks	+	R2 (Nr.16)
Task and role clarity	+	R2 (Nr.16)
Efficient coordination	+	R2 (Nr.16)
Increased trust relationship, considering employee needs	+	R5 (Nr.15)

4.5. Category E: Virtual Environment

V.E Impact working situation

Following, the results are summarized that relate to the impact of the virtual environment on the working situation. Two respondents point out that the multitude of virtual meetings is problematic (R1: Nr.15, R2: Nr.17). Besides the increased number of meetings, several interviewees state that the duration of meetings or communication in general has increased (R2: Nr.17; R4: Nr.20; R8: Nr.17). The leader R8 explicates that communication is more complex in a virtual environment and that employees work longer hours to compensate the disadvantage of working remotely (Nr.17,18).

Contrarily, R6 has not noticed an increase in communication, but the leader holds daily meetings with the team in the morning. Yet, the respondent misses the option of drawing and illustrating thoughts during the meeting to record the results for everybody. This visual is usually very helpful, but the leader has currently no digital tool to implement this virtually (*ibid.*: Nr.22).

R2 moreover argues that employees do not take enough breaks and that the stress level of virtual meetings, compared to regular on-site meetings increases by 20-30%. Consequently,

the risk of burn-out elevates considerably, according to R2. Thus, there need to be more deliberate decisions about who attends which meetings (*ibid*.: Nr.18).

Similarly, three respondents talk about the importance of scheduling and organizing communication in a structured way. While R1 and R8 sum up that the organizational effort has increased, R4 finds that effective scheduling of communication can eliminate certain problems of the virtual environment. Moreover, R4 notes that technical interruptions occur on a regular basis (R1: Nr.15; R4: Nr.19; R8: Nr.17).

Another important result is that personal interactions are reportedly missing as well as facial expressions, and that the sense of belonging to a team cannot be conveyed virtually (R4: Nr.20; R5: Nr.16; R6: Nr.22; R7: Nr.15). Hence, the respondent R5 has introduced virtual lunches in groups of four, special team meetings and one-on-one meetings in an informal virtual setting (Nr.16).

The leader even claims that virtual one-on-ones are more personal and intimate as one is more focused on the respective counterpart. However, virtual meetings cannot fully compensate for the interpersonal exchange on-site (*ibid*.: Nr.16). Nevertheless, R5 claims that relationships among employees and leaders have become more personal, because one comes into contact with one each other's private lives much more. The leader has already seen all the employees' children, spouses and pets in the background of videocalls, for instance. According to R5, the usual bonding effect of a crisis is therefore even amplified due to the virtual environment (Nr.17).

Two more aspects seem challenging to the interviewed experts, including the training of new employees and conducting performance appraisals in a virtual environment as compared to working in the office. The leader R3 points out that it is difficult to assess to what extent employees incorporate company values (Nr.18).

Lastly, the interviewee R7 notes that employees are often inattentive and distracted during virtual meetings and that attention is soon lost if more than five employees participate in a meeting. Additionally, the leader claims that monitoring subordinates regarding their work performance has become problematic (*ibid*.: Nr.15,16).

Table 23 Impact virtual environment on working situation

Impact working situation	**Referenced by**
Increased number of meetings	R2 (Nr.17)
Increased duration of meetings	R2 (Nr.17)
Facial expressions missing	R6 (Nr.22), R7 (Nr.15)
Personal interaction missing	R4 (Nr.20), R5 (Nr.16), R6 (Nr.22)
Monitoring employee's problematic	R7 (Nr.16)
Disruptions due to technical problems	R1 (Nr.14), R4 (Nr.19)
Shortened attention span in virtual meetings	R7 (Nr.15,16)
Increased risk of burnout	R2 (Nr.18)
Training and performance appraisal difficult	R3 (Nr.18)
Importance of (increased) organizational effort	R1 (Nr.15), R4 (Nr.19), R8 (Nr.17)
Virtual lunches, one-on-one meetings	R5 (Nr.16)
Sense of belonging to team difficult	R5 (Nr.16)
Relationships more personal	R5 (Nr.17)
Longer working hours	R8 (Nr.17)

V.E Adaptation leadership style

The majority of leaders have adapted their leadership styles or elements of their style to the new working situation in various ways. Two leaders, however, state that no adaptation whatsoever has been necessary while working in a virtual environment (R3: Nr.19; R7: Nr.17). Comparable to this, R6 argues that the relationship between leaders and employees is based on trust and that this has not changed due to the virtual environment. Hence, the interaction and leadership style are similar and only change if performance decreases (*ibid.*: Nr.23). Notwithstanding, *presupposition IIb* can be partially confirmed.

R1 and R2 both emphasize the importance of strengthening employees' self-management skills (R1: Nr.18; R2: Nr.19). Moreover, R1 claims that communication needs to be enhanced to convey expectations and further directions, but that role modelling has become less important (Nr.17).

Moreover, R5 refers to one-on-one meetings as a crucial adaptation to focus on the individual needs of employees (Nr.18). The style is therefore individually adapted to the subordinates. Similarly, R4 conducts daily meetings to ensure that the team spirit remains intact.

The employees are involved in the decision-making process and communication increased (*ibid*.: Nr.21).

R8 specifies that the virtual environment has allowed the leader to take on a moderating and listening position in meetings to ensure that everybody is heard. By listening to subordinates and their needs, individual solutions can be tailored (*ibid*.: Nr.19,20).

Table 24 Leadership style adaptation in the context of virtual environment

Leadership adaptation	**Referenced by**
Increased communication	R1 (Nr.17), R4 (Nr.21)
Less role-modelling	R1 (Nr.17)
Strengthening expertise, self-management skills	R1 (Nr.18), R2 (Nr.19)
Involving employees in decision-making	R4 (Nr.21)
More one-on-one meetings, daily meetings	R4 (Nr.21), R5 (Nr.18)
Listening to / focusing on individual needs	R5 (Nr.18), R8 (Nr.19,20)
Moderating role in meetings	R8 (Nr.19)
Adaptation not necessary	R3 (Nr.19), R7 (Nr. 17)

V.E. Impact Leadership on Performance

The leaders point out different aspects that particularly impact performance in the context of a virtual environment. Two respondents talk about efficient and clear communication that provides employees with sufficient information and the purpose behind certain measures (R1: Nr.19; R4: Nr.22). However, R1 also stresses that the communication increase is strenuous particularly on the leader, given that it requires discipline as well as organizational skills. Nevertheless, performance has consequently been enhanced (Nr.19).

Two respondents refer to the need of individual consideration of needs in order to improve performance (R2: Nr.20; R5: Nr.19). Leader R2, for instance, argues that some employees might prefer working virtually from home while others rather work in the office. Thus, individual needs as well as team needs must be taken into consideration in order to increase performance (*ibid*.: Nr.20). Similarly, R5 illustrates that effective one-on-one meetings as well as providing individual solutions and helping employees break cycles that they are unaware of increases performance immediately in a virtual context (Nr.19).

R8 also thinks that active listening to employees and their needs is crucial to enhance performance. Furthermore, granting flexibility and emphasizing the importance of health and

taking breaks enhances performance in the long run. In addition, the leader states that meetings that last longer than 90 minutes are inefficient in this new environment (*ibid*.: Nr.21).

R3 could not provide any information on this question, as the team has only been taken over during the pandemic and therefore no comparisons could be made with pre-crisis periods during non-virtual work environments (Nr.20). Leader R7, on the other hand, has noticed differences regarding the performance of different departments. For instance, the programmers in the company maintained a stable performance while performance of customer service employees has supposedly declined significantly. Yet, the interviewee does not address the relationship between leadership and performance in this context (*ibid*.: Nr.17).

With regard to *presupposition IIIb*, conclusions are drawn in chapter 5.

Table 25 Impact leadership on performance in the context of virtual environment

Leadership	**Impact performance**	**Referenced by**
Increased communication	+	R1 (Nr.19), R4 (Nr.22)
Consideration of individual needs and team needs	+	R2 (Nr.20), R5 (Nr.19), R8 (Nr.21)
Individualized solutions	+	R5 (Nr.19)
One-on-one meetings	+	R5 (Nr.19)
Helping employees break ineffective cycles	+	R5 (Nr.19)
Granting flexibility	+	R8 (Nr.21)
Emphasizing health and breaks	+	R8 (Nr.21)

4.6. Category F: Psychological Distress

P.D Impact working situation

The six respondents that have noticed psychological distress or have been informed by employees about struggles mostly report drops in performance (R1: Nr.20; R5: Nr.20; R6: Nr.24; R7: Nr.18). While R9 does not directly report a related performance decrease, the interviewee mentions that the current worries of employees decrease the focus on work as employees are elsewhere with their thoughts and do not listen properly (Nr.15). Other psychological distress, for instance, refers to feeling isolated or confined (R6: Nr.24; R7: Nr.18).

R5 explains that for some employees, performance has decreased due to psychological strain, while others use high stress levels as an incentive. Additionally, the interviewee states that the company had already incorporated the concept of psychological safety before the crisis in order to create a culture in which employees feel safe to talk about this topic. According to the respondent, this has become even more important during the pandemic. The company has additionally conducted a psychological risk assessment to identify and lastly counteract stress indicators, according to the leader (*ibid*.: Nr.20).

The respondent R8 points out that the current multiple roles at home and at work constitute a danger to the mental health of employees and increase the likelihood of burnouts. Yet, the leader has not noticed a decrease in performance but argues that motivation is still very high and that employees work too much. Thus, it is crucial to encourage employees to take breaks (*ibid*.: Nr.22,23).

R9 claims that the different attitudes towards the pandemic cause friction between employees, which requires the leader to assign tasks differently, so that certain employees do not work together (Nr.14). While R2 does not report any increased psychological distress, the respondent states that the personal environment of employees as well as sharing the experiences and struggles such as homeschooling with colleagues has helped everyone cope with the stress (Nr.22). Similarly, some employees have supposedly needed more attention from their leader, for example, to cope with the burden of being isolated at home especially during lockdown periods, or to discuss personal matters such as possible divorces (R6: Nr.24; R7: Nr.18).

Table 26 Impact of psychological distress on working situation

Impact working situation	**Referenced by**
Decrease in performance	R1 (Nr.20), R5 (Nr.20), R6 (Nr.24), R7 (Nr.18)
Higher stress level as incentive	R5 (Nr.20)
Worries decrease focus	R9 (Nr.15)
More attention needed from leader	R6 (Nr.24), R7 (Nr.18)
Adaptation of task assignment	R9 (Nr.14)

P.D Adaptation leadership style

The respondents refer to different leadership adaptations. Elements that are most frequently reported refer to an increase in empathy, showing understanding, providing support and considering the individual needs of employees (R1: Nr.21; R5: Nr.21; R7: Nr.20; R9: Nr.16).

The leader R1 emphasizes the importance of letting subordinates know that temporary performance decreases do not immediately result in counteracting measures, and that a leader should show the employee that he/she is trying to find a solution to help, such as allowing more temporal flexibility (*ibid*.: Nr.21).

Besides the consideration and prioritization of subordinate needs, R5 analyses every individual situation before deciding to use either a more directive leadership approach or supportive empowerment (Nr.21). Similarly, R6 confirms that when performance decreases, a more directive approach is necessary. Normally, the leader tries to be proactive to foresee challenges and react instantly. R6 furthermore argues that more inspiration and close connection would be crucial to maintain performance, while employees are confronted with higher psychological distress. However, the respondent admits that it is troubling to adapt to this challenge and that there might be potential for improvement in dealing with such situation (*ibid*.: Nr.27).

Moreover, two respondents point out the need for role modelling to exemplify that it is worth talking about being overwhelmed as well as taking care of oneself (R5: Nr.20; R8: Nr.24) vis à vis employees.

The interviewee R9 supposedly acts as a mediator, a friend and interlocuter during these uncertain times. The relationships between employees are more distant due to differing views about the pandemic. Thus, conveying respect to restore normal working relationships is currently essential. Yet, the effects of distress also require monitoring of assignments, to ensure that tasks are fulfilled (*ibid*.: Nr.16).

While R10 reports no higher psychological distress in general, the interviewee tries to reduce stress for employees with children who are more affected than those without children. The leader argues that no leadership adaptation has been necessary, but that concessions are made whenever possible. This is based on a reciprocal relationship between the leader and the subordinates (*ibid*.: Nr.14).

Overall, *presupposition IIc* is therefore supported.

Table 27 Leadership style adaptation in the context of psychological distress

Leadership adaptation	**Referenced by**
Increased empathy	R1 (Nr.21), R9 (Nr.16)
Showing understanding and support	R7 (Nr.20), R9 (Nr.16)
Consideration employee needs	R5 (Nr.21), R7 (Nr.23)

Proactive approach	R6 (Nr.25)
More directive leadership	R5 (Nr.21), R6 (Nr.27)
Supportive empowerment	R5 (Nr.21)
Role modelling	R5 (Nr.20), R8 (Nr.24)
Monitoring employees	R9 (Nr.16)
Conveying respect	R9 (Nr.17)

P.D Impact leadership on performance

In this last subcategory, the respondents quote several aspects that help maintain, stabilize or even improve performance in face of employees' psychological distress. R1, for instance, refers to increased empathy, communication and motivation. However, the interviewee also suggests that the impact on employees varies, which is why it is crucial to adapt the leadership style individually (*ibid.*: Nr.22). Similarly, R7 argues that a lenient treatment of particularly burdened employees increases performance, particularly long term. Thus, adapting to the individual needs of subordinates has enhanced efficiency (*ibid.*: Nr.21).

R5 explains that the relationship between a leader and an employee is very important, and that leadership should provide security and orientation for employees by adapting the style to subordinates and situations individually. Leading predictably shall help employees to attune to their respective leader. This lastly impacts performance positively (*ibid.*: Nr.22).

R6 uses a proactive approach to try to foresee challenges before performance decreases in the first place. Thus, the leader is very attentive and reacts to personal challenges that occur in the lives of respective employees. However, the interviewee also admits that once performance decreases, it is more difficult to keep this strategy up and running (*ibid.*: Nr.28).

With regard to *presupposition IIIc*, conclusions are drawn in the discussion chapter.

Table 28 Impact leadership on performance in the context of psychological distress

Leadership	**Impact performance**	**Referenced by**
Increase use empathy	+	R1 (Nr.22)
Individual focus on subordinates and situations	+	R5 (Nr.22)
Proactive approach	+	R6 (Nr.28)
Lenient treatment	+ (long term)	R7 (Nr.21)

5. Discussion

Following the results of the study shall be put into context and compared to theories and study results provided in chapter 2. This serves the purpose to identify matches, discrepancies as well as to elaborate new results.

Category A

The first category consists of three subcategories. The first subcategory only comprises the respective number of employees supervised and is therefore not embedded in a theoretical context. In the second subcategory information are gathered concerning the leadership styles applied by the interviewees.

Subcategory A2 – Leadership style

As mentioned before the interviewees were given a short overview about the six leadership styles discussed in chapter 2.1.2. Leaders specifically named four of the six leadership styles, namely transformational, participative, empowering and transactional. Interestingly, even though some scholars point out that different leadership styles can be used complementary, most studies only examine individual leadership styles (Somech 2005: 794). In this study however all participants described their own leadership style as a mixture of different styles or elements.

Nevertheless, transformational leadership is the most frequently mentioned style used by the respondents (R2; R4; R5; R7), followed by participative (R2; R5), empowering (R5; R8) and lastly transactional (R4). As discussed in chapter 2.1.2, transformational leadership is one of the most studied leadership styles in academia (Northouse 2018). Furthermore, this leadership style with its four specific components covers a broad spectrum of leadership elements (Bass 1997; Davis & Bryant 2003; Judge & Piccolo 2004). This comprehensive inclusion of different elements could explain why several of the respondents mention and apply this style.

In addition, various leadership elements were outlined, which will now be embedded in the theoretical context. The respondents define the following components as central to their leadership: motivation, role modelling, communication, team orientation, inspiration, trust in terms of flexibility and freedom, coaching, mentoring and developing, support, social and professional competence, supervision and direct instructions, delegation and active control and monitoring (R1: Nr.2; R2: Nr.2; R3: Nr.2; R4: Nr.2; R5: Nr.2; R6: Nr.2; R7: Nr.2; R8: Nr.2; R9: Nr.2: R10: Nr.2). In terms of the literature, most of these aspects, such as role

modelling, motivation and coaching, are key leadership elements that are often used to describe different leadership styles (Arnold et al. 2000; Judge & Piccolo 2004).

These components reflect different aspects of the leadership styles. Some elements, such as role modelling, apply for more than one leadership style. In order to determine which elements, belong to which leadership style, the scales provided in chapter 2.1.2 are consulted. Following a short overview is presented, assigning the components named by respondents to assignable categories and the respective leadership style.

Table 29 Leadership behaviours, assignable dimensions and associated leadership styles

Leadership behaviour	**Assignable dimensions**	**Associable leadership style**
Motivation, inspiration	Inspirational motivation	Transformational
Role modelling	Idealized influence	Transformational
		Ethical
	Leading by example	Empowering
Communication	Informing	Empowering
	Informing about organizational topics/ Sharing Information	Participative
	Contingent reward	Transactional
Trust/ flexibility	Affective trust	Ethical
	Freedom to make decisions and mistakes	Participative
Team-oriented	Interacting with the team	Empowering
Close interactions	Interacting with the team	Empowering
Coaching, mentoring, developing	Coaching	Empowering
	Intellectual stimulation/ Individualized consideration	Transformational
Support	Showing concern/Interacting with team	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Social competence	Interactional fairness	Ethical
	Showing concern	Empowering
	Individualized consideration	Transformational
Professional competence	-	-
Supervision,	Active management by exception	Transactional

direct instructions, delegation	Expectation that employees follow instructions precisely and immediately/ Close supervision	Directive
Active control, monitoring	Close supervision/ Employees must deliver comprehensive reports	Directive
	Active management by exception	Transactional

This overview shows that the varying components refer to categories of the transformational, transactional, directive, ethical, participative and empowering leadership styles. Only professional competence could not be assigned to a suitable category. Interestingly, the most elements (seven out of twelve) refer to dimensions of empowering leadership.

Subcategory A3 – Leadership styles and performance

All respondents articulate that their personal leadership style positively impacts performance. In chapter 2.1.3 an overview of different leadership styles and their impact on performance was presented. However, as all interviewees define their leadership styles as a mixture of multiple styles combined, it is difficult to analyse the relationship between individual styles and performance. Yet, the different styles and leadership elements mentioned by the respondents refer to the transformational, transactional, ethical, participative, directive and empowering leadership style. The results of table 2 in chapter 2.1.3 show that these leadership styles have an overall positive impact on performance. With regard to directive and participative leadership styles, it does depend on the specific context whether the respective style has a positive or negative influence on performance (Sauer 2011).

The respondents emphasize different leadership elements, which especially improve performance. These elements are: communication of a purpose, setting a clear framework, targets and individual roles, supporting employees individually, motivation that increases autonomy and enjoyment of work, focus on subordinates' potential, empowerment and encouragement, providing opportunity to contribute own ideas, reciprocal relationship between leader and employee, actively listening to needs, helping to prioritize tasks, developing skills, trust in terms of freedom and flexibility, close interaction, inspiration, well treated by leader, positive work environment and teaching values e.g. respect.

Similar to the procedure for subcategory A1, these elements are assigned to leadership categories and styles in order to gain a more precise understanding of which leadership styles have a particular positive effect on performance.

Table 30 Leadership behaviours, assignable dimensions and associated leadership styles regarding performance

Components	**Assignable dimensions**	**Associable leadership style**
Communicating purpose	Inspirational motivation	Transformational
Setting framework, targets, individual role	Contingent reward	Transactional
Supporting employees	Showing concern	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Motivation	Inspirational motivation	Transformational
Focusing on potential	Coaching	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Helping prioritizing tasks	-	-
Developing skills	Coaching	Empowering
	Intellectual stimulation	Transformational
Listening to needs	Individualized consideration	Transformational
	Showing concern	Empowering
Trust (freedom, flexibility)	Freedom for employees to make decisions and mistakes	Participative
	Affective trust	Ethical
Close interaction	Interacting with the team	Empowering
Providing opportunity to contribute own ideas	Asking employees for input	Participative
	Participative decision making	Empowering
	Intellectual stimulation	Transformational
Reciprocal relationship	Consideration behaviour	Ethical
	Individualized consideration	Transformational
	Showing concern	Empowering
Positive work environment	-	-
Well treated by leader	Individualized consideration	Transformational
Teaching values (e.g., respect)	Interacting with the team	Empowering

The aspects, positive work environment and helping prioritizing tasks, could not be clearly assigned to any dimension. Yet, the table shows that most leadership elements that the respondents consider to be particularly impactful on performance relate to transformational, ethical, empowering, participative and transactional leadership. However, only two elements

refer to participative leadership and only one element can be attributed to transactional leadership, which could indicate that leaders perceive particularly transformational, ethical and empowering leadership as performance enhancing. Interestingly, no elements related to the directive leadership style are reported.

It should be mentioned that the effects of different leadership elements might be dependent on the team or subordinates themselves. R1 argues that motivation is a central aspect to improve performance, while R2 claims motivating the team is not necessary, as the motivation level is naturally very high (R1: Nr.3; R2: Nr.3). Overall, the results of this category illustrate the positive effects of transformational, ethical, empowering, participative and transactional leadership styles on subordinate performance. These results are in line with previous findings (Avolio, Howell & Sosik 1999; Bass et al. 2003; Fong & Snape 2015; Bedi, Alpaslan & Green 2016; Chang, Chao & Chang 2018).

Category B

Subcategory B1- Impact crises on leadership and performance

The respondents focus on different effects of crises, influencing factors and emphasize varying approaches to effectively handle crises situations. Many of the factors named by the interviewees concur with previous research. R1 and R4 both mention the need for transparency, information and explanation of the purpose of certain measures as central to maintaining motivation and performance. Additionally, R1 argues that leaders need to strengthen their social competence during a crisis. This is in line with the research of Zhang, Jia and Gu (2012) who proved that a sense-making approach as well as emotional control during a crisis are crucial elements to ultimately increase motivation and performance.

R5 and R8 stress the fact that during a crisis the differences between good and bad leaders become apparent. Moreover, R5 claims that mistakes weigh more heavily and R8 argues that good leadership helps to get through a crisis. Similarly, Hamblin (1958) reports that during a crisis the influence of a leader is even higher, but also that leaders might get replaced if they are not equipped to handle the situation.

In their study, Boin et al. (2010) studied inter alia the need for control during crises, which is oftentimes illustrated by a centralized decision-making process. The study confirms that need for control is an essential dimension for effective leadership during a crisis. These results are partially confirmed by this study as R7 indicates that performance decreased due to a lack of control in the current crisis (Nr.4). Moreover, R2 confirms that higher levels of

control are usually exercised during a crisis and that decision-making is centralized (Nr.5). Contrarily, R9 points out that less control is needed during the Covid-19 pandemic due to the reliability of employees (Nr.5). Hence, the need for control and its effects on performance during a crisis might differ, depending on additional factors.

Similarly, R2 claims that leaders often apply directive leadership in terms of more control, allocation of resources and tasks as well as clear goals, during a crisis (Nr.5). This statement supports the findings of a study by Stoker, Garretsen and Soudis (2019) who show that directive leadership increased in the context of the 2008 financial crisis.

The respondents mention additional consequences such as more distance between the leader and employee (R3: Nr.4), need to strengthen organizational skills and adapting measures to respective areas (R1: Nr.4) and positive long and short-term effects of crises (R2: Nr.4,5). The literature review did not provide comparable results.

Subcategory B2 - Changes and measures due to Covid-19

The respondents name a variety of different changes and measures that have occurred and been implemented as a result of the pandemic. A total of five changes could be derived, namely: an increase in coordination and planning of meetings, an increase of meetings, usage of mainly digital communication tools, no or reduced on-site meetings and a shift of working hours.

Four of these changes can be appointed to the change to a virtual work environment (increase coordination meeting, number meetings, reduced on-site meetings, usage digital communication tools). The results support the findings of Kirchner, Ipsen and Hansen (2021) who report that organizing work and communication has become more challenging. The usage of mainly digital communication tools is mentioned by several new studies as a result of the pandemic (Carnevale & Hatak 2020; DeFilippis et al. 2020; Bartsch et al. 2021; Kirchner, Ipsen & Hansen 2021). Moreover, the finding that the number of meetings increased is in line with the study of DeFilippis et al. (2020). The fifth and last change mentioned, *shift of working hours*, underpins the effect of short-time work, homeschooling and childcare during working hours (Statista 2020b, Bartsch et al. 2021).

Regarding the measures that were implemented due to the pandemic situation, eleven different steps were reportedly taken by the leaders and the respective companies. Most of the measures relate to one of the three different challenges identified in this thesis.

Short-time work, provision of disinfectant, mandatory masks, avoidance of customer contact, installation of air filters, movement of breakout rooms and working from home relate to changed working conditions. Short-time work is one of the most frequently mentioned measures (six out of ten respondents). This result fits the statistical data provided in chapter 2.2.2 as it represents the extent of dissemination of this measure in Germany as well as Austria (Statista 2020b).

The provision of disinfectant, mandatory masks, avoidance of customer contact, installation of air filters and movement of the breakout room all refer to hygiene concepts implemented to ensure a safe work environment at the workplace. These measures are especially essential for companies that work in production as well as for teams that continue to work from the office.

Working from home, is a measure that relates both to the changed working conditions and the more specified virtual work environment. The data provided in chapter 2.2.2 illustrates that 20-30% of the employees worked remotely from home since the beginning of the pandemic (Statista 2020c). Thus, the finding of this study (eight of ten respondents mention working from home) confirms the extent of the spread of this measure but also clarifies that most leaders interviewed, manage knowledge workers. The two respondents who did not name, working from home, as a measure both primarily supervise employees who cannot work from home.

The measures that are implemented to counteract the risk of burnouts (timeouts, strengthening resilience, promote to disconnect) could relate to the psychological distress of employees during the pandemic. For instance, promoting employees to disconnect from their work might refer to the blurring of boundaries between work and personal lives due to the lack of spatial separation, while working from home (Carnevale & Hatak 2020: 183). The aspects of timeouts and strengthening resilience could relate to the general heightened distress during the pandemic (Carnevale & Hatak 2020; Restubog, Ocampo & Wang 2020; Shigemura et al. 2020; Petzhold et al. 2020; Pfefferbaum & North 2020).

Transparency in terms of constant provision of information (R1, R10) was addressed in the previous category as well und thus might be a general needed measure in crises situations to explain the purpose of means and to allay fears of employees, for instance, regarding their employment (Zhang, Jia & Gu 2012). Downsizing as well as strict cost management and adapted planning of merchandise planning cannot explicitly be appointed to one of the three

challenges and thus illustrate that a variety of measures were and are needed to meet a multitude of challenges.

Furthermore, the respondents address additional impacts such as the elimination of commute (R4: Nr.8) and the lack of informal conversations between leaders and employees (R3: Nr.5). Both effects are reported by the scholars Kirchner, Ipsen and Hansen (2021), as well. Moreover, one respondent explicates that the cultural prerequisites were missing when transforming to the virtual work environment. This statement concurs with previous research that indicates that the abrupt shift to remote work, caught leaders unprepared (Carnevale & Hatak 2020: 184; Bartsch et al. 2021: 72).

The other influencing variables such as overwork and the adaptation of starting conversations with personal questions regarding the well-being of employees might also refer to the psychological well-being or distress of employees during these uncertain times due to increased work demands (Restubog, Ocampo & Wang 2020: 2) or other factors such as anxiety, distress or depression due to social distancing, fears etc. (Petzhold et al. 2020; Pfefferbaum & North 2020; Restubog, Ocampo & Wang 2020).

Subcategory B3 – Connection Between Covid-19 and Three Challenges (W.C., V.E., P.D.)

The results of this study show that changed working conditions, a virtual environment and psychological distress are occurring challenges with decreasing frequency. While changed working conditions are challenging for all ten leaders interviewed, the virtual environment only affects eight interviewees, and the psychological distress is perceived as a challenge by six leaders. This might be the case as the changed working conditions entail a variety of different aspects making it very likely that most companies and leaders are affected, while psychological distress must be either willingly shared by the subordinates or noticed by the leaders themselves.

Nevertheless, the findings support the results of chapter 2.2.2, indicating that these three challenges have arisen as a result of the pandemic and consequently impact leaders and their subordinates. The detailed discussion of the individual challenges follows in category four to six.

Category C

All respondents agree that they adapt their leadership style or at least elements to situational demands. It can thus be stated that all leaders comply with the *Situational Approach*, particularly *Contingency Theories* indicating that there is not one effective leadership style, but that

situational aspects must be considered to create a fit (Avolio 2007). This must be distinguished from the *Pure Situational Theory* that considers leadership as a dependent variable (Vroom & Jago 2007).

The respondents cite a variety of different situational aspects that require a leadership adaptation, including: new tasks, crises, time pressure, restructurings, top-down decisions and deadlines (R1: Nr.9,10; R2: Nr.12; R3: Nr.13; R4: Nr.13; R5: Nr.16; R8: Nr.11; R10: Nr.10). Some of these examples were mentioned in the theoretical chapter 2.1.1 as external contingencies (Avolio 2007: 26f.). Interestingly, the leadership adaptation most frequently mentioned is a move towards a rather directive leadership style (R1: Nr.9,10; R4: Nr.13; R5: Nr.10; R6: Nr.16; R7: Nr.11) or away from a democratic approach (R8: Nr.11,12; R10: Nr.10).

Beside the situational demands, many respondents emphasize that an adaptation to employees and their needs individually, is at least as important, if not more so (R3: Nr.13,14; R9: Nr.11; R10: Nr.10). This approach could be attributed to the *Leader-Member Exchange Theory* that highlights the importance of the relationship between leader and subordinate. Examples include: more attention or more freedom depending on the subordinate needs or contrarily direct instructions for deviating subordinates (R5: Nr.10; R10: Nr.10). Leader R6 specifically defines the relationship between leaders and employees as a two-way street (Nr.15). This mirrors the definition of a two-way influence process between leader and subordinates (Hollander 1976: 7).

R7 argues a laissez-faire approach is appropriate when operations run smoothly (Nr.11). Even though the researcher provided a short definition of this leadership style, it might be possible that the respondent has a misconception about this style. However, this is purely speculative.

Category D

Subcategory D1 – W.C Impact working situation

The study provides evidence of four changed working conditions that affect the working situation, namely: varying working hours, spatial distance (office, home, travel restrictions), blurring boundaries between personal and professional lives, and hygiene measures.

The respondents explicate that varying working hours changed the reachability and availability of employees, due to short-time work or homeschooling. This insight supports earlier findings of Bartsch et al. (2021), who argue that the reduction of working hours as well as

homeschooling and childcare during working hours considerably affect communication in a sense that leaders might have trouble reaching their employees (*ibid*.: 74). However, consultation between leaders and their respective employees as well as coordination might resolve this problem (R4: Nr.13).

The second changed working condition refers to the spatial distance in the office, working from home as well as travel restrictions. The interviewees highlight different negative as well as positive effects. Among the negative effects are a lack of information transfer and difficulties in developing of team spirit, aligning on specific topics, maintaining relationships and fostering innovation and creativity. Travel restrictions, moreover, increase the distance between subsidiaries (R2: Nr.13). Even though the measure of travel restrictions is mentioned in different recent publications (Restubog, Ocampo & Wang 2020: 2; Rossi et al. 2020: 2), there are no results regarding the effects so far. The same applies for the other negative effects mentioned above.

The positive effects regarding the spatial constraints are performance increase, due the appreciation of employees to work flexibly, and more efficient coordination and exercise of standard tasks (R1: Nr.11; R2: Nr.14). Previous research finds that granting flexibility ultimately increases job satisfaction (Liao 2017) and that particularly temporal flexibility enhances team performance (Mohammed & Nadkarni 2011) as well as work-family life and general well-being of subordinates (Kelly et al. 2008). Regarding the more efficient coordination and exercise of standard tasks, no comparable results were found.

The effect of hygiene measures on the working situation is described as challenging for employees, particularly wearing masks on production floors with more than 36 Celsius (R10: Nr.11). The lack of appropriate work equipment (chairs, monitors etc.) proved difficult and resulted in physical discomfort as well (R6: Nr.17). Due to the limited scope of this thesis, hygiene measures were not included as changed working conditions in the literature review and thus no comparable results can be provided. Nevertheless, these are valuable findings and must therefore be taken into account.

Finally, a blurring of boundaries between professional and personal lives reportedly impacts the working situation. This challenge may tempt employees to work longer hours because of the proximity to the workspace (R3: Nr.15). This is consistent with previous studies showing that working from home limits the ability to psychologically detach from work (World Economic Forum 2020; Toniolo-Barrios & Pitt 2021: 190).

In total, the literature review provides three positive and four negative effects of comparable working conditions (see chapter 2.3.2). The study cannot confirm the increased potential for conflict or more ambiguity because of different time requirements, pacing styles and time urgency (Mohammed & Nadkarni 2011). The blurring of boundaries was moreover not attached to decreased motivation or productivity, as reported by Toniolo-Barrios & Pitt (2021). Yet, the positive effect of higher team performance due to meeting temporal preferences (Mohammed & Nadkarni 2011) applies for respondents of this study as well (R1: Nr.11).

Subcategory D2 – W.C Adaptation leadership style and subcategory D3 – W.C Impact leadership on performance

Both subcategory D2 and D3 are discussed simultaneously, as leadership styles and behaviours are directly linked to their respective impacts in the literature review.

The respondents name in total eight different leadership adaptations, namely: increasing temporal flexibility, empathy and support, communication, role modelling, humour and positivity as well as reducing overtime, adapting the content agenda and strengthening resilience.

Regarding the impact of leadership on performance in context of changed working conditions, six additional elements are mentioned that enhance performance. These aspects include clear communication, granting (temporal) flexibility, setting clear targets and tasks, task and role clarity, efficient coordination and increased trust relationship (see chapter 4.1.4).

The literature review provides three important leadership behaviours in the context of disperse working conditions, namely enhancing trust by considering employee's needs to facilitate performance and subordinates' well-being (Poulsen & Ipsen 2017), scheduling work activities and allocating resources to address temporal needs (Mohammed & Nadkarni 2011), and promoting interaction between team members to facilitate effectiveness (Liao 2017). The table below presents the results of this study that could be linked to previous research.

Table 31 Linking results from literature review to results from category D2 and D3

Literature review	**Results D2**	**Results D3**
Enhancing trust by considering employee needs (Poulsen & Ipsen 2017)	Increase empathy and support	Increase trust relationship
Scheduling work activities, allocating resources (Mohammed & Nadkarni 2011)	Adapting content agenda	Efficient coordination
	Increase temporal flexibility	Temporal flexibility
	Setting clear targets and tasks	
	Reducing overtime	
Promoting interaction (Liao 2017)	Increase communication	-

Enhancing trust by considering employee needs could be associated with an increase in empathy and support (R1: Nr.12; R5: Nr.14; R8: Nr.14,15) as well as the increased trust relationship mentioned by R5 (Nr.15). Increasing temporal flexibility, adapting the content agenda, setting clear targets and tasks, reducing overtime as well as efficient coordination (R1: Nr.13; R2: Nr.16; R5: Nr.14) could relate to the leadership behaviour of scheduling work activities and allocating resources (Mohammed & Nadkarni 2011). Moreover, promoting interaction (Liao 2017) might transfer to an increase in communication, if the increase not only refers to the communication between leaders and employees but among subordinates as well. Hence, *presupposition IIIa* is supported.

However, the increasing use of humour and positivity, reducing overtime and role modelling do not relate to any previous findings in the context of disperse working conditions. It can be concluded that leadership aspects that refer to scheduling work activities seem to be particularly important when leading subordinates in the context of changed working conditions.

The leadership behaviours and their impact on performance in the context of changed working conditions have now been discussed. Following, the leadership behaviours are compared to different leadership style dimensions to gain a deeper understanding of which leadership styles have been frequently used in relation to this challenge, and ultimately had a positive impact on performance. For this purpose, the scales described in chapter 2.1.2 are used again.

Table 32 Comparing leadership adaptations in the context of changed working conditions (D2) to leadership style dimensions

Leadership adaptation D2	**Assignable dimensions**	**Associable leadership styles**
Increasing temporal flexibility	Affective trust	Ethical
	Freedom to make decisions	Participative
Increased usage of empathy, support	Consideration behaviour	Ethical
	Individualized consideration	Transformational
	Showing concern	Empowering
Increasing communication	Informing	Empowering
	Sharing information	Participative
	Contingent reward	Transactional
Increased usage of positivity and humour	-	-
Role modelling	Idealized influence	Transformational
		Ethical
	Leading by example	Empowering
Adapting content agenda	-	-
Recommending to reduce overtime	-	-
Strengthening resilience	-	-

Table 33 Comparing leadership behaviours that are positively related to performance in the context of changed working conditions (D3) to leadership style dimensions

Leadership behaviour D3	**Assignable dimensions**	**Associable Leadership Styles**
Clear communication	Informing	Empowering
	Sharing information	Participative
	Contingent reward	Transactional
Granting (temporal) flexibility	Affective trust	Ethical
	Freedom to make decisions	Participative
Setting clear targets and tasks	Contingent reward	Transactional
Task and role clarity		
Efficient coordination	Contingent reward	Transactional
Increased trust relationship, considering employee needs	Affective trust	Ethical
	Showing concern	Empowering
	Individualized consideration	Transformational

Some reported leadership behaviours cannot be unequivocally assigned to leadership dimensions and thus ultimately to leadership styles. This applies for the increased usage of positivity and humour, adapting the content agenda, recommending employees to reduce overtime and strengthening resilience. Nevertheless, the table elucidates the increased usage of five of the six leadership styles defined in chapter 2.1.2. Interestingly, ethical, transactional and participative each have four applicable behaviours. Transformational leadership can be assigned twice regarding the leadership adaptation and once in terms of positive effects on performance. This is a surprising result, since transformational leadership is considered to be a wide-ranging leadership style (Bass 1997). Most leadership behaviours can be attributed to empowering leadership, suggesting that this leadership style is particularly impactful in face of changed working conditions. The literature review does not provide insights regarding (in-)effective leadership styles in the context of adapted working conditions. Therefore, no comparisons can be made, and these results can be classified as new findings.

Category E

E1 - V.E Impact working situation

The respondents name a variety of different effects on the working situation, in face of a virtual environment. In total, twelve different aspects could be identified. Some results confirm previous findings, but discrepancies and others factors can also be deduced.

For one, the results match the findings of DeFilippis et al. (2020) regarding the increased number of meetings, as well as the determined risk by Kirchner, Ipsen and Hansen (2021) that employees and leaders do not take enough breaks because of overly filled calendars (R2: Nr.17,18). Contrary to DeFillipis et al.'s (2020) results, it is stated that the duration of meetings increases (R2: Nr.17).

Secondly, different studies report the lack of interpersonal interaction and a lack of face-to-face interaction as a downside to a virtual environment, as well (Davis & Bryant 2003; Hertel, Geister & Konradt 2005; Kirchner, Ipsen & Hansen 2021). The previously suggested complexity of team development in a virtual environment (Bell & Kozlowski 2002) concurs with the current finding that the sense of belonging to a team, is missing (R5: Nr.16).

The increased organizational effort while working virtually is also defined as a pressing challenge by managers in Kirchner, Ipsen and Hansen's (2021) study. The perception that monitoring employees has become more difficult, and that technical disruptions impact the

virtual working situation are also reported by previous studies (Bell & Kozlowski 2002, Huang, Kahai & Jestice 2010; DeFilippis et al. 2020).

Regarding the findings of increased burn-out risk, shortened attention span in meetings and difficulties to conduct performance appraisals as well as implementing virtual lunches and one-on-one meetings, no comparable results could be found. Overall, it can be said that many of the effects mentioned, confirm earlier results. However other challenges that the literature review brought about, such as more misunderstandings (Davis & Bryant 2003; Zaccaro & Bader 2003; Hertel, Geister & Konradt 2005), difficulties to resolve problems or develop trust and cohesion (Davis & Bryant 2003; Huang, Kahai & Jestice 2010), cannot be confirmed.

In addition, the literature review provides evidence that technostress might occur in the current virtual environment, since employees might have trouble coping with the increased demand of using digital tools (Spagnoli et al. 2020). The respondent R2 addresses this point, emphasizing that in virtual meetings the stress level is about 20-30% higher than in on-site meetings. This could lastly increase the risk of burnouts (Nr.18).

E2- V.E Adaptation leadership style and subcategory E3 – V.E Impact leadership on performance

Similar to the discussion of the previous category, the adaptation of the leadership style and the impact of leadership on performance in face of a virtual environment, will be discussed together. The interviewees list seven different leadership adaptations to meet the challenges of the virtual environment. These adaptations include: increasing communication, less role modelling, strengthening expertise and self-management skills, listening to subordinate needs, involving employees in the decision-making process, conducting more one-one-one meetings and taking on a moderating role during meetings (R1: Nr.17; R2: Nr.19; R3: Nr.19; R4: Nr.21; R5: Nr.18; R7: Nr.17; R8: Nr.19,20).

Regarding the impact of leadership on performance, the interviewees refer to seven additional aspects that impact performance positively, namely: increasing communication, considering needs, individualising solutions, conducting more one-one-one meetings, helping subordinates break cycles they are unaware of, granting flexibility and emphasizing health and the need of taking breaks. One can already determine overlaps that are mentioned in both subcategories which are: the increase in communication, listening and considering needs and conducting one-on-one meetings (R1: Nr.19; R2: Nr.20; R4: Nr.22; R5: Nr.19; R8: Nr.21).

Analysed studies in the literature review suggest that transformational, transactional and directive leadership enhance performance in a virtual environment. Moreover, twelve different leadership behaviours were presented that positively affect subordinate performance.

The heightened need of listening to employees and considering their needs coincides for instance with conveying empathy and understanding (Davis & Bryant 2003). The importance of granting more flexibility in a virtual environment to maintain or enhance performance was previously mentioned by Liao (2017) and Bartsch et al. (2021), as well. The same applies for strengthening expertise and self-management, which Bartsch et al. (2021) found to enhance flexibility. The leadership behaviour empowering and motivating employees, referenced by Zaccaro and Bader (2003) can also be interpreted as a strengthening of self-management. Moreover, provision of information (Carte, Chidambaram & Becker 2006) as well as setting and communication a purpose (Zaccaro & Bader 2003) might refer to the increased communication mentioned by the respondents. The leadership adaptations of less role modelling, involving employees in the decision-making process, taking on a moderating role as well as providing individualized solutions, helping employees break cycles they are unaware of, and emphasizing health and the need to take breaks, seem to be new results.

Now, to derive statements regarding the adaptations of leadership styles and their impact on performance in a virtual environment, the reported leadership behaviours are again compared to the assignable leadership dimensions to determine associable styles.

Table 34 Comparing leadership adaptations in the context of a virtual environment (E2) to leadership style dimensions

Leadership adaptation E2	**Assignable dimensions**	**Associable leadership styles**
Increased communication	Informing	Empowering
	Sharing information	Participative
Less role-modelling	Idealized influence	Transformational
		Ethical
	Leading by example	Empowering
Strengthening expertise, self-management skills	Coaching	Empowering
	Individualized consideration	Transformational
Involving employees in decision-making	Participative decision-making	Empowering
	Asking employees for input, participating in decision-making process	Participative
More one-on-one meetings, daily meetings	-	-
Listening to / focusing on individual needs	Showing concern	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Moderating role in meetings	Intellectual stimulation	Transformational

Table 35 Comparing leadership behaviours that are positively related to performance in the context of changed a virtual environment (E3) to leadership style dimensions

Leadership behaviour E3	**Assignable dimensions**	**Associable leadership styles**
Increased communication	Informing	Empowering
	Sharing information	Participative
Consideration individual needs and team needs	Showing concern	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
One-on-one meetings	-	-
Helping break cycles	-	-
Granting flexibility	Affective trust	Ethical
	Freedom to make decisions	Participative
Emphasizing health and need to take breaks	Showing concern	Empowering

These tables show that behaviours associated with empowering, participative, transformational and ethical leadership are increasingly applied and positively impact performance in the context of a virtual work environment.

Concerning transformational leadership, the results are consistent with previous studies, which report an increase in qualitative performance, higher cohesiveness and satisfaction and an increased cooperative climate that ultimately increases performance (Hoyt & Blascovich 2003; Huang, Kahai & Jestice 2010). Regarding Purvanova and Bono's (2009) finding that transformational leadership has a higher influence in a virtual context, this study does not provide results. The same applies to results from Andressen, Konradt & Neck (2012), which suggest that transformational leadership has a lower influence on self-leadership. Surprisingly, the statements also indicate that transformational, ethical and empowering leadership in terms of role modelling, is less important in a virtual environment.

Interestingly, while research indicates positive effects of transactional and directive leadership on effectiveness and performance in a virtual work environment (Hoyt & Blascovich 2003; Carte, Chidambaram & Becker 2006; Huang, Kahai & Jestice 2010), no interviewee refers to adaptations or positive effects in this regard.

As mentioned above, many of the leadership behaviours in table 8 relate to those mentioned in this study. The same applies for findings regarding transformational leadership. However, the leadership behaviours mentioned refer neither to transactional nor to directive leadership. Hence, *presupposition IIIb* is only partially supported.

Category F

F1 - P.D Impact working situation

The psychological distress due to the pandemic reportedly decreases performance or at least impacts the focus on work (R1: Nr.20; R5: Nr.20; R6: Nr.24; R7: Nr.18; R9: Nr.15) Only one interviewee claims that higher stress is occasionally used as an incentive and hence increases performance (R5: Nr.20). Another leader reports that sharing and exchanging experiences with colleagues, for instance, regarding homeschooling helps employees to cope with the burden (R2: Nr.22).

The results underline preceding research, as numerous studies prove that psychological burden decreases performance (Boles, Pelletier and Lynch: 2004; Hourani, Williams & Kress 2006; Poulsen & Ipsen 2017). The decreased focus on work due to worries underestimates this result further (R9: Nr.15).

Yet, Kotteeswari and Sharief (2014) claim there is positive and negative stress depending on the individual perception of employees. This could explain why respondent R5 argues that some employees use the higher stress level as an incentive to perform better (Nr.20).

Subcategory F2 – P.D Adaptation leadership style and subcategory F3- P.D Impact leadership on performance

Different leadership adaptations to meet the challenge of higher psychological distress are listed. These adaptations include: increasing empathy, showing understanding and support, considering employee needs, role modelling, monitoring employees, conveying respect, using a proactive approach as well as more directive leadership or supportive empowerment (R1: Nr.21; R5: Nr.20,21; R6: Nr.26; R7: Nr.23; R8: Nr.24; R9: Nr.16,17). Thus, *presupposition IIc* is generally supported.

Regarding the impact of leadership on performance in face of psychological distress, different aspects reportedly enhance or help maintain performance. This includes more empathy, individual responsiveness to subordinates and situations, a proactive approach and lenient treatment (R1: Nr.22; R5: Nr.22; R6: Nr.28; R7: Nr.21).

Kirchner, Ipsen and Hansen (2021) refer to the special importance of mental health in distance work by arguing that the well-being is essential to maintain performance. This could explain why respondents who noticed signs of distress adapted their leadership accordingly.

Poulsen and Ipsen (2017) moreover, emphasize the importance of considering subordinate needs while working spatially distant in order to increase motivation. This concurs with statements of the leaders interviewed, as most of them refer to either support, understanding, empathy, lenient treatment and consideration of employees' needs as the most important leadership adaptations that have a positive impact on performance.

Once more, the leadership behaviours reported by the interviewees are compared to leadership dimensions to define which leadership styles are increasingly applied in the context of higher psychological distress and lead to positive performance effects.

Table 36 Comparing leadership style adaptations in the context of psychological distress (F2) to leadership style dimensions

Leadership adaptation F2	**Assignable dimensions**	**Associable leadership styles**
Increase empathy	Showing concern	Empowering
	Interactional fairness	Ethical
	Individualized consideration	Transformational
Showing understanding, support	Showing concern	Empowering
	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Consideration employee needs	Individualized consideration	Transformational
	Consideration behaviour	Ethical
Proactive approach	-	-
More directive leadership	-	Directive
Supportive empowerment	Individualized consideration	Transformational
	Coaching	Empowering
Role modelling	Leading by example	Empowering
	Idealized influence	Transformational
		Ethical
Monitoring employees	Close supervision	Directive
	Active management by exception	Transactional
Conveying respect	Interacting with the team	Empowering

Table 37 Comparing leadership behaviours that are positively related to performance in the context of psychological distress (F3) to leadership style dimensions

Leadership behaviour F3	**Assignable dimensions**	**Associable leadership styles**
Increase empathy	Showing concern	Empowering
	Individualized consideration	Transformational
	Interactional fairness	Ethical
Individual focus on subordinate and situation	Individualized consideration	Transformational
Proactive approach	-	-
Lenient treatment	-	-

The table clearly illustrates that leadership behaviours associated with empowering, ethical, transformational, directive and transactional leadership styles, are increasingly applied and positively affect performance in the context of employees' psychological distress. Transformational leadership can be associated with the most reported leadership adaptations and pos-

itive effects, followed by empowering, ethical and lastly transactional and directive leadership.

The assumptions and studies regarding empowering leadership in the context of psychological distress provide rather contradictory results. While one study finds that empowerment is related to resilient behaviour (Nguyen et al. 2016), another proves that the relationship between empowering leadership and performance decreases in the context of higher psychological strain. This relates to empowering behaviours regarding enhancing employees' autonomy (Roberge & Boudrias 2021). These two rather opposing studies might, however, explain why respondent R5 weighs up individually whether to choose a more empowering or a more directive leadership style to determine, if more autonomy would benefit or overwhelm the employee even further (Nr.21). Interestingly, leadership behaviours associable to empowering leadership are the second most frequently mentioned leadership adaptations.

The study of Avey, Palanski and Walumbwa (2011) found that ethical leadership has a high influence on more organizational citizenship and less deviance behaviour, if subordinates have a rather low self-esteem. If the current psychological burden of employees translates to lower self-esteem, this might explain the leadership adaptation and positive effects of ethical leadership on performance.

Moreover, contingent reward as a part of transactional leadership has proven to enhance resilient behaviour (Nguyen et al. 2016). The authors report a positive moderating effect of optimism, which however is opposed to the current high level of psychological burden. The same applies for the study of Baig et al. (2021) who suggest a positive effect of transformational leadership on performance when moderated by psychological capital. During episodes of high psychological distress, it can be assumed that positive psychological capital decreases.

Nonetheless, it can be concluded that the interviewees adapt their leadership style towards more transformational, empowering and ethical behaviours with some directive or transactional measures, if necessary. Hence, *presupposition IIIc* is only confirmed regarding the positive effect of ethical leadership, not in terms of a lesser impact of empowering leadership. In this regard rather opposing results can be reported.

6. Conclusion

This master thesis addressed two very different phenomena. First, the Covid-19 pandemic is analysed as an unprecedented crisis that has dominated life worldwide for more than twenty months now. On the other hand, this thesis deals with the topic of leadership, which has been a central subject of research for decades. The goal of this study was to examine the situational impact of the largely unexplored pandemic on leadership and performance based on three derived challenges.

The results of the theoretical chapter 2 can be distinguished into definitions and influence relationships. First, historically grown leadership theories and a concise leadership definition were presented. In particular, the *Situational Approach,* in the form of the *Contingency Theories,* serves as a central basis for this work, since it is assumed that leadership must be adapted to situational conditions. Additionally, six leadership styles were defined, including transformational, transactional, ethical, empowering, participative and directive leadership. These definitions served as a foundation that allowed to classify different leadership behaviours into styles, within the qualitative study. Moreover, general crises definitions were presented, which were then used to identify the Covid-19 pandemic as both a natural disaster and an economic shock. Lastly, the three challenges: changed working conditions, a virtual environment and psychological distress that have arisen as a result of the crisis, were defined and delineated.

Furthermore, the theoretical chapter analysed various influencing relationships, starting with studies that measure the impact of different leadership styles on performance. This provided a basic understanding of which leadership styles have positive or negative effects on employee outcomes. Then, the situational influence of previous crises on leadership and performance was examined in order to draw conclusions in the qualitative study, regarding which effects may be crisis-specific or crisis-related in general.

Lastly, studies were consulted that examine the influence of such situational variables and moderators on leadership and performance that are comparable to the three defined challenges. In this context it can be stated that more research is needed, especially with regard to working conditions and psychological distress. Nevertheless, the findings of this review illustrate varying effects as well as (in-)effective leadership styles and behaviours in face of comparable situational variables.

The results of this study provide various insights. First of all, it can be stated that the interviewed leaders all indicate using a mixture of different leadership styles. The specific styles mentioned as well as the statements regarding other leadership elements and behaviours suggest that transformational, transactional, ethical, empowering, participative and directive leadership, are applied. What is surprising, however, is that most leadership behaviours can be classified as empowering leadership.

Additionally, the direct correlation between leadership and performance is confirmed by the respondents. The leaders emphasize various leadership elements that positively reinforce the influence of leadership on performance. These elements could again be assigned to all six leadership styles mentioned above. The determined positive correlation is in line with previous research findings (Bass et al. 2003; Somech 2005; Rowold 2011; Sauer 2011; Fong & Snape 2015; Yang & Wei 2017). It is interesting to note that elements that can be assigned to transformational, ethical and empowering leadership are alluded particularly frequently. However, it must be pointed out that situational influencing factors also seem to play a role, as very different significance is attributed to motivation in particular.

The results regarding the influence of crises on leadership and performance are broadly comparable to results of previous studies (Boin et al. 2010; Stoker, Garretsen & Soudis 2019). Key aspects highlighted include that directive leadership or in general more control is increasingly applied in crises. In addition, other aspects, such as the importance of transparency and information are underlined.

A total of five different changes and eleven key measures are defined by the respondents in the context of the Covid-19 crisis. Most of the changes revolve around the transition to a virtual work environment, including for instance the increased number of meetings and the usage of mainly digital communication tools. Most of the measures mentioned, can be assigned to all three derived challenges. However, short-time work and working from home are the most frequently reported measures. In terms of the changes described and measures taken, many overlaps with recent studies can be noted (Carnevale & Hatak 2020; DeFilippis et al. 2020).

Furthermore, it is verified that the three challenges are created by the crisis and affect many leaders and their respective subordinates. While changed working conditions affect all leaders, the virtual environment challenges eight respondents and employees' psychological distress pertains to six leaders. This distribution can possible be explained by the fact that the changed working conditions include various aspects that seem to apply across industries.

However, it must be pointed out, that the fact that more than half of the respondents indicate psychological distress as a challenge is considerable and illustrates how mentally stressful the current situation is for individuals. Nevertheless, the results provide evidence to support *presupposition I*.

In terms of theoretical understanding of leadership, all respondents acknowledge the importance of situational conditions. An interesting finding is that leaders predominantly cite adaptations towards more directive leadership when talking about situational influences. The researcher of this thesis does not know if any research has been conducted in this regard. Furthermore, the interviews reveal that leaders mainly adapt to employees individually, in addition to situational demands. The *Leader-Member Exchange Theory* therefore appears to be an essential theoretical foundation.

The changed working conditions cause different positive as well as negative effects. For example, more efficient coordination and improved performance due to increased flexibility, are recorded as positive effects. Reduced information transfer as a result of spatial separation and physical strain due to a lack of appropriate office chairs serve as negative examples. Many findings are consistent with previous research, for example, regarding the effects of short-time work and homeschooling (Bartsch et al. 2021).

Regarding leadership adaptations in face of changed working conditions, most respondents refer to enabling increased temporal flexibility. Other adaptations include, for instance, increasing usage of humour and positivity as well as empathy and support. Hence, *presupposition IIa* is confirmed. Overall, with regard to the perception of leadership adaptation and the influence of leadership on performance in the context of changed working conditions, elements are named that can be assigned to transformational, ethical, participative, transactional and empowering leadership. Only directive leadership behaviours are not mentioned. In summary, it can be said that in the context of changed working conditions, transformational, transactional, participative, ethical and empowering leadership are particularly effective in maintaining or even improving performance. Moreover, the results of the study confirm the assumption of *presupposition IIIa* that strengthening trust, promoting interaction and coordination are particularly impactful leadership behaviours in face of changed working conditions.

Moreover, concerning the influence of the virtual environment on the working situation, a total of twelve effects can be noted. The aspects are manifold and include effects, such as a lack of personal interaction as well as technical difficulties, longer working hours and many

more. While some findings, such as the increased number of meetings, support previous findings (DeFilippis et al. 2020), other effects are seemingly new results, including the risk of burnout or the difficulties to conduct performance appraisals in a virtual environment.

The respondents confirm that leadership adaptations in the context of the virtual environment are required. Only two interviewees argue that no adaptations were necessary whatsoever. Hence, *presupposition IIb* is only partially confirmed. Surprisingly, all alluded elements whether in regard to the direct adaptation or the influence of leadership on performance in face of a virtual environment, could be attributed to transformational, ethical, empowering and participative leadership. No leadership behaviours that fit the definition of transactional and directive leadership are indicated. Therefore, the results confirm the *presupposition IIIb* only in regard to transformational leadership and certain leadership behaviours including communication, provision of information, providing support and autonomy, strengthening self-leadership, guidance and flexibility and conveying empathy and understanding.

The third and last challenge, psychological distress, impacts the working situation particularly through performance decreases. This is consistent with findings of previous studies that examine the effect of psychological stress on performance (Boles, Pelletier & Lynch 2004; Hourani, Williams & Kress 2006). However, other effects are mentioned as well, including for instance the adaptation of task assignments and more required attention from the leader. These seem to be new insights.

Lastly, ten different leadership adaptations in the context of psychological distress can be reported. Hence, *presupposition IIc* is supported. Most of the leadership behaviours mentioned refer to an increase of empathy, support and understanding. However, contrarily to the adaptations concerning the challenge of a virtual environment, the increased usage of leadership elements particular to transactional and directive leadership are reported, while no participative leadership elements are mentioned. Concerning the impact of leadership on performance given psychological distress, positive effects are cited that are attributed to an increased usage of empathy, an individual focus, a proactive approach and a lenient treatment. All in all, the leaders seem to effectively apply transformational, transactional, directive, empowering and ethical leadership in face of employees' psychological distress. *Presupposition IIIc* is partially confirmed regarding the positive effect of ethical leadership, however not in terms of a lesser impact regarding empowering leadership.

The aim of this thesis was to answer two research questions, namely:

1. How does the Covid-19 pandemic impact the relation between leadership and performance?

2. What leadership styles have a positive impact on performance given

a) the challenges related to the changed working conditions caused by Covid-19?

b) the challenges related to the virtual environment caused by Covid-19?

c) the challenges related to the subordinates' psychological well-being during Covid-19?

In can be noted that the Covid-19 crisis affects leadership and performance in different ways. On the one hand, it shows that three challenges (working conditions, virtual environment, psychological distress) have emerged from the crisis that influence leadership and performance. However, it must be pointed out that positive effects can also be recorded, such as the appreciation of employees to work flexibly and virtually from home. Furthermore, the results regarding the changes and introduced measures, have shown that other consequences and effects have resulted from the crisis beyond the three challenges.

Finally, the results of this study provide insights into effective leadership styles and behaviours in face of the three challenges. In terms of changed working conditions, the findings suggest that enhancing elements of ethical, transactional, participative, transformational and empowering leadership improves performance. In relation to the virtual environment, particularly leaderships behaviours attributed to transformational, empowering, participative and ethical leadership positively impact performance. In the context of employees' psychological distress, performance can be maintained or even increased by applying empowering, ethical, transformational, transactional and directive leadership.

Admittedly, the study is subject to limitations. First of all, it is of course not possible to present significant results due to the limited number of interview partners. This study, however, makes it apparent that regardless of the company size, specific area of expertise, industry or management level – most leaders are currently facing similar challenges.

Another limitation concerns the one-sided view of this topic. In chapter 2.1, leadership was defined as a "process of interactive influence […]" (Silva 2016: 3), which makes it clear that leaders are included as well as those who are led. Therefore, it must be noted that the subordinates' perspective is missing.

Furthermore, it is difficult to attribute precise leadership style adaptations to the individual challenges. It can be assumed that there are overlaps. Nevertheless, the results suggest that certain behaviours are specifically chosen to respond to the specific challenges. However, only pre-defined leadership styles are taken into account. It may be possible to assign the leadership behaviours mentioned to other leadership styles. Additionally, several mentioned leadership behaviours could not be unequivocally assigned to the very concretely defined leadership dimensions of the styles. It would need even more comprehensive leadership dimensions.

Lastly, the *social desirability bias* should be addressed, which always characterises a concern in research that interview partners may embellish statements. This could, of course, apply to statements made by the leaders regarding their leadership styles. Nonetheless, through the assurance of anonymity, the interview partners were at least guaranteed the confidentiality of their statements.

At the end of the interviews, the leaders were asked if there was anything else they would like to add to the topic. Since these statements could not be included in the analysis, one of the comments will be presented here:

“I just read this morning that […] it is only once per generation that you think about changing or developing on a fundamental level, at least the way an organization works and leads. And I think this is one of these situations - it was the Industrial Revolution, it was World War II, the digital revolution and now the pandemic crisis. And I think we are in the middle of this process and just started to learn what is working, what is not working and that from a leadership, but also from an employee level” (R2).

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Appendix

Appendix 1: Interview Guideline (German)

1. Allgemeine Fragen: Führung

a) Wie viele MitarbeiterInnen betreuen Sie?
b) Wie würden Sie Ihren Führungsstil beschreiben?
c) Passen Sie Ihren Führungsstil situativen Bedingungen und Anforderungen an?
d) Wie würden Sie den Einfluss (Ihres) Führungsstils auf MitarbeiterInnen-Performance beschreiben?

2. Krisensituation und COVID-19

a) Wie würden Sie den Einfluss von Krisen auf die Beziehung zwischen Führung und Performance einschätzen?
b) Was hat sich für Sie und Ihr Team seit dem Covid-19 Ausbruch verändert?
c) Welche Maßnahmen haben Sie implementiert um sich den situativen Herausforderungen anzupassen?

3. Einfluss aktueller Herausforderungen auf Führung und Performance

In meiner Masterarbeit habe ich drei krisenbedingte Herausforderungen abgeleitet, die Führung und Performance beeinflussen. Eine bekannte Führungstheorie, der *situative Führungsansatz* (*Kontingenztheorien*) besagt, dass es nicht den einen effektiven Führungsstil gibt, sondern dass Führung an aktuelle situative Anforderungen und Änderungen angepasst werden muss.

a) Denken Sie, es ist notwendig Führung an situative Bedingungen anzupassen und Führungsstile abhängig von aktueller Anforderung zu wählen? Falls ja, können Sie mir ein Beispiel nennen bzw. eine Situation, an die Sie sich erinnern, wo es notwendig war Ihr Führungsverhalten anzupassen? Oder würden Sie sagen, dass Sie Ihren Führungsstil oder Ihr Führungsverhalten kontinuierlich adaptieren?

3.1 Arbeitsbedingungen

Die erste Herausforderung betrifft die veränderten Arbeitsbedingungen. Der Fokus liegt hier auf temporaler und räumlicher Einschränkung. Viele Unternehmen mussten während der Coronakrise Kurzarbeit einführen. Darüber hinaus mussten beispielsweise MitarbeiterInnen mit Kindern sich zusätzlich um die Betreuung und Homeschooling kümmern. Die zeitliche Erreichbarkeit der MitarbeiterInnen hat sich daher durch die Krise verändert.

Der zweite Faktor betrifft die räumliche Einschränkung, da viele Büros zeitweise geschlossen waren/sind und auch alternative Arbeitsräume (z.B. Geschäftsreisen) wegfallen. Die Konsequenz daraus ist die fehlende Trennung von privatem und professionellem Raum.

a) Bestehen diese Herausforderungen für Sie und Ihre MitarbeiterInnen?
b) Falls ja, inwiefern haben diese Veränderungen die Arbeitssituation beeinflusst?
c) Haben Sie Ihren Führungsstil angepasst, um diesen Herausforderungen zu begegnen?
d) Welchen Effekt hat Ihr Führungsstil auf MitarbeiterInnen-Performance unter diesen veränderten Arbeitsbedingungen?

3.2 Virtuelles Arbeitsumfeld

Die zweite Herausforderung betrifft den abrupten Wandel zu einem virtuellen Arbeitsumfeld. Dazu zählt u.a. die Umstellung und Nutzung vorwiegend digitaler Kommunikationsinstrumente, Internetprobleme und Führung ohne persönliche (von Angesicht zu Angesicht) Interaktion.

a) Arbeiten Sie und Ihr Team virtuell von zuhause? Bzw. haben Sie virtuell von zuhause gearbeitet?
b) Was sind die Herausforderungen im Zusammenhang mit diesem neuen virtuellen Umfeld?
c) Wie haben Sie Ihren Führungsstil angepasst, um dieser Herausforderung zu begegnen?
d) Wie würden Sie sagen, beeinflusst Ihr Führungsstil MitarbeiterInnen-Performance unter diesen veränderten Umständen?

3.3 Psychologisches Wohlbefinden/ Belastung

Die letzte Herausforderung, die wir thematisieren betrifft das psychologische Wohlbefinden Ihrer MitarbeiterInnen. Verschiedene wissenschaftliche Studien belegen, dass psychische Belastung die individuelle Performance senkt. Die letzten anderthalb Jahre waren für alle Teile der Bevölkerung herausfordernd und erste Studien belegen höhere Raten von Depressionen, Angststörungen und allgemeiner Frustration.

a) Haben Sie Anzeichen von psychischer Belastung bei Ihren MitarbeiterInnen festgestellt? Oder haben MitarbeiterInnen Ihnen solche Probleme kommuniziert?

b) Falls ja, beeinflusst die psychische Belastung die Performance?
c) Haben Sie diese Herausforderung adressiert? Haben Sie Ihren Führungsstil angepasst?
d) Wie würden Sie sagen, beeinflusst Ihr Führungsstil die Performance Ihrer MitarbeiterInnen unter diesen Bedingungen?

Appendix 2: Interview Guideline (English)

Questions
1. General Questions Leadership a) How many employees do you lead? b) How would you describe your leadership style? c) Do you adapt your leadership style to situational demands? d) How would you say does (your) leadership style impact performance of employees?
2. Crisis situation and COVID-19 a) How would you say do crises situation impact the relationship between leadership and performance? b) What changed for you and your team since the Covid-19 outbreak? c) What measures were implemented to adapt to the current crisis situation?
3. Effect challenges on leadership and performance In my thesis I determined three challenges caused by the pandemic that affect leadership and performance. One leadership theory, the *Situational Approach* (*Contingency Theories*) assumes that there is no one best leadership style but that leadership needs to be adapted to current demands and situational changes. a) Do you think it is necessary to adapt leadership to situational demands and change leadership styles depending on current requirements? If so maybe you can give an example of a situation that you can remember where you had to adapt your leadership behavior to situational demands? Or would you say that you adapt your leadership style constantly?

3.1 Working conditions

The first challenge relates to the changed working conditions. We focus here on temporal and spatial limitations and flexibility. Firstly, due to the crisis many organizations had to implement short-time work. Moreover, employees with children have/had to homeschool and take care of their children during working hours due to the closure of schools and other child care facilities. Consequently the availability and reachability has changed.

The second aspect concerns the spatial limitations due to the closure of many offices and alternative workspaces (e.g. business trips). With many employees working from home the separation of personal and professional space is reportedly missing.

a) Are any of these challenges present for you and your employees?
b) If yes, how did these arrangements impact the working situation?
c) Did you adapt your leadership style to meet new demands?
d) What effects does your leadership style have on performance given the changed working conditions?

3.2 Virtual environment

The second challenge we want to focus on revolves around the abrupt change to a virtual environment. This includes e.g. the conversion to and usage of mainly digital communication tools, problems with internet connections and leadership without/with limited personal (face-to-face) interactions.

a) Do you and your team work virtually from home?
b) What are challenges related to this new environment?
c) How did you adapt your leadership style/behavior to address this challenge?
d) How would you say does your leadership style impact your employees' performance given these circumstances?

3.3 Psychological well-being/distress

The last challenge we want to discuss is the psychological well-being of employees. It is well researched that mental distress decreases performance. The last year has been challenging for the entire population and first studies indicate higher rates of anxiety, signs of depression and frustration.

a) Did your employees communicate, or did/do you notice signs of psychological distress in your employees?
b) If so, did/does it affect their performance?
c) Did/ do you address this challenge? Did you adapt your leadership style?
d) In the presence of this challenge, how would you say, does your leadership style impact performance?

Appendix 3: Handout Definitions Leadership Styles (German)

Definitionen verschiedener Führungsstile

<u>Transformational, Transaktional & Laissez-faire Führung</u>

Transformational:
→ Motivation MitarbeiterInnen mehr zu leisten als gefordert/erwartet

4 Komponenten:

1. Idealisierte Einflussnahme:
Vorbildfunktion Führungskraft (moralische Prinzipien, Werte des Unternehmens vertreten)

2. Inspirierende Motivation:
Kommunikation einer Vision, Sinnhaftigkeit der Arbeit

3. Intellektuelle Stimulation:
Motivation zu neuen Denkmustern, Hinterfragen von Vorgehensweisen, geistige Anregung

4. Individualisierte Berücksichtigung:
Förderung Mitarbeiter und agieren als Mentor; Berücksichtigung Bedürfnisse und Unterstützung

Transaktional:
→ Austauschverhältnis: Leistung gegen Belohnung, klare Regeln und Ziele

3 Komponenten:

1. Leistungsorientierte Belohnung
Klare Kommunikation von Erwartungen und zu erwartender Belohnung

2. Aktive Führung durch aktive Kontrolle
Direkte Überwachung/Kontrolle von Mitarbeitern, falls nötig Intervention

3. Passive Führung durch Eingreifen in Bedarfsfall
Eingreifen der Führungskraft nur bei Abweichung/bereits entstandenen Problemen

Laissez-faire:
→ Nicht-Führung bzw. Verweigerung von Führung

Direktive vs. Partizipative Führung

Direktiv:
→ klare Instruktionen, Strukturierung von Aufgaben, zentralisierte Führung

- Führungskraft erwartet, dass Mitarbeiter Aufgaben ausführen und Anordnungen befolgen (keine Einbeziehung bei Entscheidungsfindung)

Partizipativ:
→ Inklusion von Mitarbeitern bei Entscheidungsfindung und Problemlösung

- Mehr Freiheit für Mitarbeiter zu entscheiden, wie sie ihre Aufgaben erfüllen und Ziele erreichen
- Wechselseitige Kommunikation

Ethische & Empowernde Führung

Ethisch:
→ Fokus auf ethischem Verhalten der Führungskraft

- Hohe ethische Standards z.B. Integrität und Fairness, Bestrafung von unethischem Verhalten
- Sorge und Anteilnahme bzgl. Bedürfnissen von Mitarbeitern – führt zu reziprokem Verhalten (besondere Unterstützung bei Erreichung der Ziele)

Empowernde:
→ Fokus auf Entwicklung von Selbstmanagementkompetenzen, Unterstützung

- Förderung des Selbstbewusstsein, Entwicklung elementarer Fähigkeiten (Coaching)
- Bemächtigung zu eigenverantwortlichem Arbeiten (mehr Autonomie)

Für mehr Informationen:

Arnold, K., Loughlin, C. (2013): Integrating transformational and participative versus directive leadership theories. *Leadership & Organization Development Journal* 34 (1), 67-84.

Bass, B. (1997): Does the Transactional-Transformational Leadership Paradigm Transcend Organizational and National Boundaries? *American Psychologist* 52 (2), 130-139.

Somech, A. (2005): Directive Versus Participative Leadership: Two Complementary Approaches to Managing School Effectiveness. *Educational Administration Quarterly* 41 (5), 777-800.

Northouse, P. (2018): Leadership: theory and practice. SAGE Publications, Thousand Oaks.

Sturm, M., Reiher, S., Heinitz, K., Soellner, R. (2011): Transformationale, transaktionale und passiv-vermeidende Führung. Eine metaanalytische Untersuchung ihres Zusammenhands mit Führungserfolg. Zeitschrift für Arbeits-u. Organisationspsychologie 29 (2), 88-104.

Van Dierendonck, D., Dijkstra, M. (2012): The Role of the Follower in the Relationship Between Empowering Leadership and Empowerment: A Longitudinal Investigation. *Journal of Applied Social Psychology* 42, 1-20.

Appendix 4: Handout Definitions Leadership Styles (English)

Definitions of different leadership styles

Transformational, Transactional and Laissez-faire Leadership

Transformational:
→ Inspiring and motivating subordinates to perform beyond expectations

4 components:

1. Idealized influence:
Acting as a role model for subordinates

2. Inspiring motivation:
Communicating a vision, providing a purpose

3. Intellectual stimulation:
Motivating subordinates to challenge existing standards and beliefs

4. Individualized consideration:
Considering and listening to subordinates' needs, developing and coaching/mentoring subordinates

Transactional:
→ Rewards in exchange for performance, clear structures and objectives

3 components:

1. Contingent Reward
Path-goal transaction: rewards in exchange for performance

2. Active management by exception
Monitoring employees' work directly, intervening if necessary

3. Passive management by exception
Intervening only if deviations occur that cause problems

Laissez-faire:
→ Absence of leadership

Directive and Participative Leadership
Directive:
→ clear instructions and structuring of tasks, centralized leadership

- Leader expects compliance – expecting that subordinates follow instructions and accomplish their tasks (no inclusion in decision-making)

Participative:
→ Including subordinates in decision-making and problem-solving

- More freedom for subordinates to decide how they accomplish their tasks and reach objectives
- Two-way communication

Ethical and Empowering Leadership

Ethical:
→ Focus on ethical behaviour

- Leaders promote high ethical standards (e.g., integrity, fairness), if necessary, punishment for unethical behaviour
- Concern for subordinates' well-being and consideration of subordinates needs – is reciprocated by employees by higher motivation, more effort etc.
-

Empowering:
→ Focus on developing self-management skills of subordinates, supporting role

- Conveying confidence in subordinates' skills and capacities to accomplish their work
- Self-management skills allow subordinates to work more autonomously
- Participative decision-making

For further information:

Arnold, K., Loughlin, C. (2013): Integrating transformational and participative versus directive leadership theories. *Leadership & Organization Development Journal* 34 (1), 67-84.

Bass, B. (1997): Does the Transactional-Transformational Leadership Paradigm Transcend Organizational and National Boundaries? *American Psychologist* 52 (2), 130-139.

Somech, A. (2005): Directive Versus Participative Leadership: Two Complementary Approaches to Managing School Effectiveness. *Educational Administration Quarterly* 41 (5), 777-800.

Northouse, P. (2018): Leadership: theory and practice. SAGE Publications, Thousand Oaks.

Sturm, M., Reiher, S., Heinitz, K., Soellner, R. (2011): Transformationale, transaktionale und passiv-vermeidende Führung. Eine metaanalytische Untersuchung ihres Zusammenhands mit Führungserfolg. Zeitschrift für Arbeits-u. Organisationspsychologie 29 (2), 88-104.

Van Dierendonck, D., Dijkstra, M. (2012): The Role of the Follower in the Relationship Between Empowering Leadership and Empowerment: A Longitudinal Investigation. *Journal of Applied Social Psychology* 42, 1-20.

Appendix 5: Participant Information and Declaration of Consent (German)

Teilnehmerinformation

Liebe Teilnehmerin, lieber Teilnehmer,
wir freuen uns über Ihr Interesse, an dieser wissenschaftlichen Studie teilzunehmen!
Diese Befragung wird im Zuge der Abfassung einer wissenschaftlichen Masterarbeit an der Universität Wien erstellt. Die Daten können von dem Betreuer bzw. Begutachter/in der wissenschaftlichen Arbeit für Zwecke der Leistungsbeurteilung eingesehen werden. Die erhobenen Daten werden gemäß Art. 89 Abs. 1 DSGVO gespeichert.

Sie verfügen über folgende persönliche Rechte im Rahmen dieser Befragung:

- Die Teilnahme an der Studie ist **freiwillig**. Sie können das Interview jederzeit abbrechen.
- Ihre Teilnahme ist **anonym**, Ihre Antworten können nicht auf Sie zurückgeführt werden. In der Masterarbeit wird ein Pseudonym verwendet (z.B. InterviewpartnerIn 1).
- Falls Sie nach der Studie Auskunft über Ihre Daten haben wollen oder Ihre Teilnahme zurückziehen, bitten wir Sie, dies zu vermerken.
- Ihre Daten werden ausschließlich für **wissenschaftliche Zwecke** verwendet.
- Die Forschung folgt keinem kommerziellen Interesse. Wir behandeln all Ihre Daten **streng vertraulich**.

Wenn Sie Fragen zu dieser Erhebung haben, wenden Sie sich bitte gerne an die Verantwortliche dieser Untersuchung: Frederike Müller (a11849112@unet.univie.ac.at Studentin der Studienrichtung Internationale Betriebswirtschaft an der Universität Wien).

Einverständniserklärung Interview

Ich erkläre hiermit mein Einverständnis zur Nutzung der personenbezogenen Daten, die im Rahmen des folgenden Gesprächs erhoben werden:

- *Datum des Interviews:*
- *Namen der interviewenden Person: Frederike Müller*
- *Durchführende Hochschule: Universität Wien*
- *Betreuer der Masterarbeit: Univ.-Prof. Mag. Dr. Rudolf Vetschera*

Die Daten werden im Rahmen eines mündlichen Gesprächs erhoben, das mit einem Aufnahmegerät aufgezeichnet wird. Zum Zwecke der Datenanalyse werden die mündlich erhobenen Daten verschriftlicht (Transkription), wobei die Daten pseudonymisiert werden. Eine Identifizierung der interviewten Person ist somit ausgeschlossen.

Kontaktdaten, die eine Identifizierung der interviewten Person zu einem späteren Zeitpunkt ermöglichen würden, werden aus Dokumentationsgründen in einem separaten Schriftstück lediglich dem Begutachter der wissenschaftlichen Ausarbeitung zur Verfügung gestellt. Nach dem Abschluss des Projekts werden diese Daten gelöscht.

Der Speicherung der personenbezogenen Daten zu Dokumentationszwecken kann durch die interviewte Person jederzeit widersprochen werden. Die Teilnahme an dem Gespräch erfolgt freiwillig. Das Gespräch kann zu jedem Zeitpunkt abgebrochen werden. Das Einverständnis zur Aufzeichnung und Weiterverwendung der Daten kann jederzeit widerrufen werden.

_____

Vorname und Name in Druckbuchstaben

_____

Unterschrift

_____

Datum, Ort

Appendix 6: Participant Information and Declaration of Consent (English)

Participant information

Dear participants,
we are pleased about your interest in participating in this academic study!
This interview is conducted in the context of an academic master thesis at Vienna University. The collected data can be accessed in line of the performance evaluation by the assigned supervisor. The surveyed data are stored in accordance with Article 89. Section 1 DSGVO.

In the context of the interviews, you have the following rights:

- The participation in the survey is voluntarily. You can terminate the interview at any point.
- The participation is anonymous. Your answers cannot be traced back to you. Within the master thesis a pseudonym is used (e.g., Interview partner 1)
- If you want information about your personal data after the study or want to withdraw your participation, contact the researcher responsible for this study (Frederike Müller)
- The data is only used for academic purposes.
- The research does not have a commercial interest. We treat all your personal data strictly confidential.

If you have any questions regarding this study, please feel free to contact the responsible person for this study: Frederike Müller (a11849112@unet.univie.ac.at International Business Administration at Vienna University).

Declaration of consent

I hereby declare my agreement with the usage of my personal data, in the context of the following interview:

- Date of the interview:
- Name of the person interviewing: Frederike Müller
- Conducting university: University of Vienna
- Master thesis supervisor: Univ.-Prof. Mag. Dr. Rudolf Vetschera

The data is collected in the context of an oral interview, which is captured using a recording device. To allow an analysis of the collected data, the interviews are transcribed. The data

gathered is however pseudonymised. An identification of the person interviewed is thus excluded.

Contact data, that allows an identification of the person interviewed, are retained on a separate document for reasons of proper documentation. Only the person responsible for the study, and the academic advisor of this thesis have access to this information. These personal data will be deleted once the project is completed.

The participation in the survey is voluntarily. The interview can be terminated at any point. The consent concerning the recording and further use of the data can be withdrawn at all times.

_____

Name and surname

_____

Signature

_____

Date and place

Appendix 7: Content Summary Analysis Transcript R1

Nr	Cat	Paraphrase	Generalization	Reduction 1&2
1	A1	The leader R1 currently oversees 200 to 210 employees.	The leader R1 oversees 200 to 210 employees.	200 to 210
2	A2	Leader R1 uses a team-oriented leadership style with various components of different styles. The focus is on five different criteria, namely: motivation, role modelling social and professional competence, and communication.	The leader describes the leadership style as team-oriented, with five essential components: motivation, role modelling, social and professional competence, communication.	Team-oriented leadership style: motivation, role modelling, communication, social and professional competence.
3	A3	Leader R1 has become acquainted with different leadership styles in his working life (almost 40 years). The spectrum ranges from a very hierarchical leadership style with directives and assertive instructions to a motivational leadership style. Hierarchical, directive leadership styles tend to lead to employees not realizing their own potential, whereas motivation leads to more autonomy, less necessary instructions and more enjoyment of work, which ultimately makes employees more efficient and productive.	Over the course of his working life, the leader has noticed differences in the effects of different leadership styles on employee performance. Very hierarchical, directive leadership styles often lead to employees not fully realizing their potential. Motivational leadership styles lead to more independence, utilization of potential, and enjoyment of work, which is reflected in higher performance.	With directive, hierarchical leadership styles, the potential often cannot be fully exploited. Motivational leadership styles increase efficiency and productivity through more independence, autonomy and enjoyment of work.
4	B1	The influence of crises on leadership and performance is different regarding production and administration. Communication and transparency regarding measures and further development are particularly important, especially in the production area. This can	Crisis response and handling must be tailored to the respective area (e.g., administration, production). Different leadership competencies become more important in crisis situations. In the area of production, communication	Crisis response and handling must be tailored to the respective area (e.g., administration, production). When certain leadership elements are strengthened (e.g.,

		alleviate employees' fears and thus stabilize performance. In the area of administration, communication is just as central. Leaders have however various options here, such as introducing rotations related to short-time work, so that employees have one or two days off in turn. In addition, the social competence of the leader becomes more important in order to perceive the problems and needs of the employees (e.g., closure of kindergartens). If the social competence is paired with organizational skills, performance can even be increased.	and transparency are central in order to reduce employees' fears. In the area of administration there are more means and possibilities. In addition to communication, social competence and organizational skills are especially important. If such leadership elements are strengthened, performance can be stabilized or even increased.	communication, transparency, social competence, organizational skills), performance can be stabilized or even increased.
5	B2	In the company, two months of short-time work were introduced in 2020. This measure is very drastic but makes it clear to the employees that the job is to be retained. Short-time work is therefore a short-term means of reducing working hours for a certain period, as the crisis causes a drop in orders or cancellations. In administration, other measures such as working from home have been introduced. As a result of working from home or the fact that not all employees are in the office on site, other instruments for collaboration must be used. Meetings must be planned more frequently in order to discuss work arrangements.	The company has introduced two months of short-time work in 2020. The advantage of this drastic measure is that employees' fears are relieved, and the company can respond to declines in orders. In administration, working from home is another measure. Here, it is essential to increase the planning and coordination of meetings in order to plan the further course of work.	Two months of short-time work were introduced in production in 2020. This measure can be used to allay employees' fears and respond to declines in orders. In administration, working from home is a measure. Coordination and planning of meetings is becoming more important.
6	B3	There are differences between production and administration. Measures such as home office are not possible in production, since this work must take place on site at the machines. In this case, alternative adjustments can be made to make the situation more pleasant for the employees. Regarding short-time work, it would concern the reduction by the day instead of by the hour in order to create free space for employees. In doing so, one can also try to include individual problems such as childcare. Through working from home, childcare is relatively easier to handle, but still very difficult for the individual to work and look after children simultaneously. The problem can be alleviated by creating temporal freedoms, but certain office hours must be adhered to. All in all, home offices are more likely to create more spatial flexibility in administration, since employees in production must work on site in any case.	The work situation differs in terms of production and administration. Since working from home is not possible in production, the only way to make the situation more pleasant for employees is to make alternative adjustments. In the case of short-time work, for example, by reducing working hours by the day instead of by the hour. In administration, working from home can create more freedom in terms of time and space, for example to handle childcare and homeschooling. However, there must also be fixed office hours.	In production usage of alternative adjustments, such as reducing the workload by the day instead of by the hour (e.g., short time work). In administration, the option of a working from home gives employees more time and space to take care of their children. However, there are also limitations here (office hours). Employees will want to continue to partly work from home in the future. Unlikely that work will be completely switched to working from home, as visual aspects of communication (gestures, facial expressions) are too important.
7	B3	Employees have found working from home very pleasant and will wish to be able to work from home for one or two days after the pandemic has subsided. The work performance has been convincing up to now, which is why the leader R1 is very satisfied with the work. Home office or the necessary technical equipment is cost-intensive, but pays off in the long run, since employees accept it gratefully and the joy of work increases as a result.	It is expected that employees will also want to work from home one or two days a week in the future. Leader R1 is very satisfied with the work performance under these conditions. Even though the technical equipment is cost-intensive, it would pay off in the long term, the employees are grateful for the opportunity and the enjoyment of the work increases.	Employees will want to continue to partly work from home in the future. Unlikely that work will be completely switched to working from home, as visual aspects of communication (gestures, facial expressions) are too important.

8	B3	The psychological distress of employees is dependent on the individual living and family situation. The coincidence of homeschooling and working from home results in a considerable psychological burden. The executive has only the option to allow for temporal flexibility so that subordinates can manage the different responsibilities. This is however not always possible. Therefore, employees with small children face currently higher psychological stress. Employees without children might still have fears and worries for instance concerning their employment. There is a general frustration because some branches of business are still not recovering. The company only had two month of short time work and are now currently working under normal conditions as the order situation is at a pre-crisis level.	The psychological distress varies dependent on the individual living and family situation. The coincidence of homeschooling and working from home is a psychological burden. The executive has the option of allowing more temporal flexibility in this regard. This is however not always possible. Employees without children might have fears concerning their employment. The company only had two month of short time work and are now currently at a pre-crisis level concerning orders.	The psychological burden depends on the individual situation. The coincidence of homeschooling and working from home is a burden. The executive can allow more temporal flexibility, but this is not always possible. Other employees might have fears regarding their employment.
9	C1	The style itself tends not to change depending on the situation but remains the same. However, different components come into focus. In crisis situations, communication, social competence and empathy become more important, especially when existential questions arise. When new team tasks are set, motivation is a central component.	The leadership style remains the same. Depending on the situation, however, components come to the fore. Empathy and communication are central in crisis situations; motivation would be more important in new team tasks.	Leadership style does not change. Certain elements (communication, motivation, social/professional expertise) are adapted or reinforced depending on situation (crisis, new tasks). Regarding short-time work, directive instructions for action were necessary.
10	C1	As stated at the beginning of the interview, leader R1 would say that certain elements and characteristics of the leadership style change depending on the situation. However, the leadership style per se remains the same. Depending on the situation, the style is then adapted rather than changed. In response to certain situational requirements, for example, social competence, communication or expertise can then be used more intensively as leadership behavior. The example of short-time work illustrates this, as vacation days must be taken in advance. This represents a directive measure, since employees cannot be involved in the decision-making process. It can be seen from such an example that certain leadership elements change depending on the situation.	Rather, elements of the management style such as communication, professional competence or social competence are adapted to the specific situation or used more intensively. Short-time work and the instruction to take old leave beforehand represent a directive measure in response to the current situation. Certain leadership elements must therefore be adapted depending on the situation.	
11	D1	A surprising finding was that by enabling working from home, the performance of employees has increased even more. Efficiency and performance have improved compared to the classic office routine, as employees have the opportunity to organize their work themselves. By moving away from the classic fixed office hours (generally 9-5) and opening up the possibility of doing certain work at other times. This has proven to be efficient and pragmatic.	Employee performance has increased especially due to working from home, compared to the performance in the traditional office environment. Employees have the opportunity to schedule their work more flexibly and to deviate somewhat from the normal office hours. This has resulted in greater efficiency and pragmatism.	There is an increase in employee performance in the home office. Employees can schedule their work more flexibly which results is a higher performance than in the classic office environment.
12	D2+ D3	Employees are more motivated to do their jobs because leader R1 has used social skills more. This has had a positive effect on employee performance. The professional competence of the employees has also increased, as employees act in a more	The increased focus on social competence in dealing with employees has increased general work motivation, which in turn has had a positive impact on performance. In addition, the professional competence of employees	Work motivation has increased through the increased use of social competence. Performance increased. Professional competence of employees has

		problem- and solution-oriented manner and also communicate this. It is problematic that many MS Teams meetings are necessary to communicate with the different teams - technology, purchasing, sales, etc. - in order to achieve the desired results.	has improved, as they have acted in a more solution- and problem-oriented manner. However, the number of digital meetings is problematic, as many meetings with the different teams (purchasing, sales, technology, etc.) are necessary.	improved through independent problem- and solution-oriented action. The quantity of digital meetings is problematic.
13	D3	In administration, higher performance was achieved through home office and flexibility. In production, performance increases were also achieved through very clear communication. Employees in production were told very clearly that short-time working was necessary. Although this meant a reduction in pay, the clear communication relieved employees of some of their worries and psychological stress, as it was made clear that their jobs were to be retained. This has led to positive performance effects.	In administration, home office and flexibility increased performance. In production, clear communication that eased employees' worries about the workplace also led to productivity gains.	In administration, performance has increased through home office and flexibility. In production, clear communication has contributed to production increases.
14	E1	Difficulties with the Internet connection are a problem, especially in some regions. The Internet landscape in parts of the country (Germany) is not designed for this, at least not yet. With such connection difficulties, it helps to turn off the camera function. This works without any problems, but then the face-to-face interaction is lost. Direct, face-to-face interaction is easier than virtual communication, because facial expressions and gestures play an essential role. Therefore, a complete switch to home office would be unthinkable.	There are difficulties with Internet connections, which can largely be resolved by switching off the camera function. However, since gestures and facial expressions are an essential part of communication, a complete switch to home office is currently not conceivable.	Problems with the Internet Connection. Those can be resolved by switching camera off, however than facial expressions missing. Miscommunication or conflicts were not perceived, more likely in office environment. Currently more restraint due to virtuality. When putting teams together, important that factual discussions can arise, but personal
15	E1	Miscommunication or conflicts due to the virtual environment have not been perceived. The potential for conflict in the office is even higher compared to the virtual environment, due to the increased personal interaction. However, the general communication has become more compared to the office environment, because there is no possibility to go to employees in the office. This results in a higher organizational effort.	Miscommunication or conflicts were not perceived in the virtual context. The potential for conflict tends to be higher in the on-site, office environment than in the virtual environment. However, there is an increased communication and organizational effort, since meetings have to be planned in advance.	
16	E1	Leader R1 cannot make a judgment about whether the already established relationships between employees had a positive effect on virtual communication. However, the manager believes it is possible that employees are better able to gauge the reactions of other colleagues as a result. It is important that teams are put together in such a way that discussions take place on a factual level, but conflicts on a personal level are avoided. In the virtual work environment, especially because it is a new and unknown situation, many employees would be more reserved than face-to-face.	It can only be speculated that if employees already knew each other before the crisis began, this can have a positive effect on virtual communication. In general, it is important for teams to be put together in such a way that factual discussions arise, but preferably no conflicts on a personal level. In the virtual working environment, there is currently more restraint to be observed.	
17	E2	Increased communication from the executive has become very important in the virtual environment. As mentioned at the beginning of the interview, executive R1 does not consider a single leadership style to be applicable, but rather a combination of the various elements (e.g., transformational,	Communication has become very important in the virtual environment. The leader R1 considers a combination of various elements of different leadership styles to be important. In dependency, individual leadership components become more important.	Increased communication is crucial (expectations, directions, problems due to working together). Role modeling less important. Individuals, work and work results should be measured against

		transactional). In dependency, individual leadership components then become more important. Professional competence is always present, but especially in the case of problems that arise from working together, communication is a central instrument. Clear communication regarding the respective goals, expectations and future directions. Taking on a role model function is then less important in comparison with motivation and communication instruments.	Problems that arise from working together demand for increased communication. Clear communication regarding goals, expectations and future directions is central. Other aspects such as role modelling are in comparison less important.	company values. Individual way to work result might differ. Strengthening of expertise and self-management competencies.
18	E2	The company has a set of values against which everyone should measure themselves. This applies as well for the work and the respective results. The control consists in achieving objectives. Soon it becomes obvious if objectives are accomplished or not. The individual way of achieving objectives might differ, also from the leader R1's expectations but the expertise of subordinates as well as self-management competencies shall be strengthened.	The company has a set of values against which everyone as well as work and results shall be measured. Control is respectively achieved by accomplishing objectives. The individual way to a work result might however differ, also from the expectations from R1, yet the expertise as well as the self-management competencies shall be strengthened.	
19	E3	The impact of leadership on subordinates' performance given the virtual environment differs. Some measures such as the instruction to take old vacation, are not pleasant. It is therefore crucial to communicate and explain the reasons, background and possibilities associated with this instruction. Working from home rather increased performance, therefore it can be argued that this was a successful measure. Communication was central regarding the virtual environment to allow a constant stream of communication. Increasing communication particularly in this environment is however strenuous as it requires a lot of discipline and organizational skill to ensure that various issues are tackled, and everyone is not talking in a jumbled way. This required an adaptation to the new environment.	The impact of leadership on subordinates' performance given the virtual environment differs. Some measures (e.g., short time work) are not pleasant. Communication and explanation of reasons, background information's and possibilities associated with these measures are thus crucial. Working from home in a virtual environment increased performance. Increased communication allowed for a constant stream of communication. This however is strenuous as it requires a lot of discipline and organizational skill to manage the virtual team meetings.	The impact of leadership on performance given virtuality differs. Some measures (e.g., short time work) are not pleasant, efficient communication to provide reasons, information etc. is thus crucial. Working from home virtually increased performance. Increased communication allowed for a constant stream of communication. It is however strenuous as it requires discipline and organizational skills.
20	F1	The psychological distress caused by the pandemic does impact performance.	The psychological distress caused by the pandemic does impact performance.	The psychological distress caused by the pandemic does impact performance.
21	F2	Communication is again a central instrument to allay fears of employees and explain honestly the state of the company. This is an opportunity to allay fears even though it is not possible to take away fears completely. […] The leader R1 increasingly uses social competence i.e., empathy to address this challenge. It is important to show understanding and convey that a decrease in performance does not immediately have work measures consequently. Allowing for more temporal flexibility might also positively impact the situation. Empathy is however necessary to signal to employees that their burden and needs are noticed and considered and that the leader tries to find solutions. Some issues such as the closure of schools and kindergartens is out of the leader's control. However, it helps to show	Communication is a central instrument to allay fears and explain the state of the company. It is however not possible to take away fears and stress completely. […]The leader R1 increasingly uses empathy to address this challenge. Showing understanding and conveying to employees that a temporary decrease in performance does not immediately result in work measures. Empathy is necessary to signal to employees that their psychological burden is noticed and considered, meaning that the leader tries to find solutions. Some issues e.g., school closure is out of the leader's control. Yet, it helps to show understanding and allow for more temporal flexibility.	Communication is a central instrument to allay fears. Yet, it is not possible to take away fears and stress completely.[…]Increasing use of empathy to address this challenge. Showing understanding and conveying that temporary performance decreases do not immediately result in measures. Empathy is necessary to signal that psychological burden is noticed and considered. Showing that leader tries to find solutions e.g., allowing more temporal flexibility.

		understanding and allow for more temporal flexibility.		
22	F3	Increased usage of social competence i.e., empathy, communication and motivation help to stabilize or even improve the performance of employees. The impact of leadership on performance given the psychological distress varies however from employee to employee. It is important to adapt the leadership style to bring certain components to the fore.	Increased usage of empathy, communication and motivation stabilizes or even improves performance. The impact varies however from employee to employee. It is important to adapt the leadership style to bring certain components to the fore.	Increased usage of empathy, communication and motivation stabilizes/improves performance. The impact varies from employee to employee. It is important to adapt leadership.

Appendix 8: Content Summary Analysis Transcript R2

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R2 manages a team of seven subordinates	The leader R2 manages a team of seven subordinates	7
2	A2	The leader R2 describes his/her leadership style as a combination of the transformational and the participative styles. The team consists of highly experienced subordinates with general management profiles. The leader focuses on coaching and developing the subordinates on an individual level, using the transformational and participative leadership style. The small size of the team further facilitates collaboration at eve level.	A combination of the transformational and participative leadership style is applied. The leader focuses on coaching and developing subordinates on an individual level. The small size of the team as well as the high level of experience facilitates collaboration within the team at eye level.	A combination of the transformational and participative leadership style, with an emphasis on coaching and developing. Highly experiences team members and small team size facilitate collaboration at eye level.
3	A3	The subordinates in the team are highly intrinsically motivated. Thus, motivating the team is not a leadership priority in this case. The leader impacts subordinates and the subordinate's performance by setting a clear frame including the targets, the purpose and support the subordinates individually. The task of the team is the support of various projects and consulting different project teams. Setting clear targets and a clear role impacts the performance of the leaders' subordinates.	Motivating the team is not a leadership priority, as the subordinates are already highly intrinsically motivated. The team supports various projects and has a consulting function. The leader impacts the performance of the subordinates by setting a clear framework, including the purpose, the targets and the individual role and supporting the subordinates individually.	The leader impacts the performance of the subordinates by setting a clear framework, including the purpose, the targets and the individual role. Moreover, the leader supports the subordinates individually. Motivating the team is not necessary.
4	B1	Crises can have a positive impact on performance. The leader R2 differentiates between short- and long-term effects. A crisis increases productivity and performance short term, as it forces companies to focus on core targes and activities to overcome the crisis. Long term, the crisis allows companies to identify and lastly eliminate redundant elements regarding systems and processes and prioritize elements that are important. If it is not an existential crisis, crises can have positive effects on performance both short and long term.	A crisis can have a positive impact on performance. In the short term perspective, it increases productivity and performance as it forces companies to focus on core targets. In the long-term perspective crises can increase performance by revealing redundant processes or elements within systems that can be eliminated. Thus, if it is not an existential crisis it can positively impact performance both short and long term.	Short term, crises can increase performance by forcing companies to focus on core targets. Long term, crises can increase performance by revealing redundant elements. Crises can have positive effects. Leaders often use rather directive style, clear goals, organizing, allocating tasks and resources. High level of control is exercised. Many decisions made at highest management level.
5	B1	Oftentimes in crisis situations leaders adapt their leadership from for instance transformational and participative leadership to a rather directive approach. In crisis situations leaders have a clear goal, clear role of	In crises situations leader oftentimes use a rather directive leadership style. In a crisis leaders focus on a clear goal and place an emphasis on organizing and allocating tasks and re-	

		organizing and allocating tasks and resources. Compared to non-crisis situations leader thus increase control instead of focusing on coaching and developing subordinates. Moreover, many decisions are made at the highest management levels.	sources. A higher level of control is exercised instead of focusing on developing and coaching subordinates like in non-crisis situations. Many decisions are made at the highest management level.	
6	B2	The team works remotely from home for one and a half years now. This impacts the team building as well as the general organization including scheduling meetings and planning sessions. This has been the biggest change regarding the working conditions since the Covid-19 outbreak.	The team works remotely since the beginning of the pandemic. This way of working impacts the team building as well as the organization of work, including scheduling meetings and planning sessions. This has been the biggest change.	Short-time work in few departments. Strict cost management program. Planning of merchandise buying, and safe planning adjusted to weekly or daily. Team works remotely from home. This measure impacts team building, organization of work (e.g., scheduling meetings).
7	B2	The company implemented short time work soon after the outbreak of the pandemic. This measure pertained to the sales and merchandise management as well as some parts of the headquarter departments. The leaders' team did not work short time. A strict cost management program was installed. The planning of merchandise buying, and planning is now strictly managed on a weekly or daily basis instead of monthly.	The company implemented short time work soon after the outbreak of the pandemic in a few departments. A strict cost management program was installed. The planning of merchandise buying, and safe planning was adjusted to a planning short time meaning on a weekly or daily basis.	
8	B3	Working remotely from home as well as limited travelling are challenges that are present for the company.[…] Working remotely has advantages as well as disadvantages. Developing a team spirit and aligning on topics has proven to be more difficult in a remote working situation. Moreover, finding solutions to align family responsibilities and work is challenging both for the team as well as the leader R2. A clear separation between private and professional life is difficult to achieve during this pandemic.	Limited business travel and working remotely are challenges the company faces, particularly due to the degree of internationalization. […] Working remotely has advantages but many disadvantages as well. This includes difficulties to develop a team spirit and align on topics. Additionally, finding solutions to align family responsibilities and work is challenging for both the team and the leader. The boundaries between private and professional lives are blurring.	Limited business travel and remote work are current challenges, particularly because of the degree of internationalization (U.S, Europe). […] Finding solutions to align family responsibilities and work has proven difficult. Blurring boundaries between private and professional lives.
9	B3	The team works remotely since the beginning of the pandemic.	Team works in virtual environment.	Team works in virtual environment.
10	B3	The team leader did not notice high levels of psychological distress in the team.	No higher levels of psychological distress occurred within the team.	Psychological distress is not a challenge for the team.
11	C1	The leader answers the question if he/she adapts the leadership style to situational demands with yes.	The leader adapts his/her leadership style to situational demands.	Adapting leadership style to situational demands. Pandemic illustrates need to adapt quickly. Challenge to take a directive approach regarding core activities to ensure efficiency, but in other situations encourage and motivate subordinates to find new solutions and foster growth-mindset.
12	C1	Leader R2 would agree that it is necessary to adapt the leadership style to current situations. The example of the Covid-19 pandemic shows that both companies and leaders need to be able to adjust quickly. It is important for companies to be lean and strict regarding the core activities and business, but also be innovative. Leader thus often need to take a rather directive approach to ensure efficiency in the core activities and ensure lean management. Yet, leaders also need to encourage and motivate subordinates to challenge existing standards and to foster a growth mindset in teams. The challenge for leaders as well as teams is thus to satisfy the different requirements and adapt to the demands in certain situations. A combination of both - a	It is necessary to adapt leadership styles to current situation. The example of the Covid-19 pandemic shows the need for leaders and companies to adapt quickly. Companies need to be lean and strict regarding their core activities, but also allow innovative thinking. The challenge for one that leaders must take a more directive approach to ensure efficiency in the core activities and secondly encourage and motivate subordinates to challenge existing standards and foster a growth mindset. Satisfying the different requirements and adapting to situational demands poses a challenge for leaders as well as their teams.	

		rather directive leadership as well as an encouraging leadership style, depending on the current demands is therefore necessary.		
13	D1	It is an international company with business in the United States as well as different European countries. The distance between the various subsidiaries has grown bigger. Before the pandemic monthly meetings were held across organizational teams.	The company has subsidiaries across Europe and the United States. Since the Covid-19 outbreak the distance between the subsidiaries has increased.	The distance between subsidiaries has increased.
14	D1	Working remotely has advantages as well as disadvantages. Developing a team spirit and aligning on topics has proven to be more difficult in a remote working situation. […] Many processes are nowadays more efficient than pre-Covid, for instance coordination, standard tasks and standard processes. Yet, communication as well as team building, and team involvement process are topics that are more complex and more difficult to manage. The various aspects that relate to interpersonal relations, creativity and innovation are challenging due to the current working situation.	Advantages and Disadvantages of working from home. Developing team spirit, aligning on topics, difficult. Coordination, standard tasks and standards processes are nowadays more efficient than pre-Covid. Yet, communication, team building, and the team involvement process are more complex and difficult to manage. The same applies for other aspects relating to interpersonal relations, creativity and innovation.	Working remotely has advantages. Disadvantages are difficulties developing team spirit, aligning on topics. […] Coordination, standard tasks and processes are more efficient than pre-Covid. Communication, team building, the team involvement process, interpersonal relations, creativity and innovation are more complex and difficult to manage.
15	D2	The flexibility of team members was high before Covid yet increased even further since the pandemic. The leader focused on the end results and granted the subordinates the decision when and how they finished their tasks. The amount of communication has increased considerably. The leader contacts subordinates frequently assuring a constant stream of communication. This communication increase has been the biggest change. One challenge that remains unsolved refers to upholding a shared team identity and team motivation. Using digital communication tools is not sufficient to achieve this.	The level of flexibility in the team was high before Covid, yet it increased even further. The leader R2 leaves the decisions when and how subordinates do their work up to them. The amount of communication has increased considerably. A constant stream of communication is installed. This posed a big change. Upholding a shared team identity and team motivation is difficult. There are no solutions to this problem yet.	The level of flexibility was high pre-Covid and increased further. Subordinates can decide when and where they work. The amount of communication has increased considerably. A constant stream of communication is installed. Upholding a team identity and motivation poses a problem that is not yet solved.
16	D3	The high level of flexibility positively impacted performance, as subordinates appreciate the freedom to organize their work and align it with personal responsibilities. Target setting as well as task planning also positively contributed, even though there is still room for improvement. Moreover, subordinates noticed the efforts to improve coordination and role and task clarity and reciprocated the efforts. The lack of personal interaction also outside the offices is not yet affecting performance but it is reportedly missing. The sense of belonging to the team and a common goal and purpose are more difficult to achieve as well.	The high level of flexibility positively impacts performance. Subordinates appreciate the freedom to organize their work and align their schedule to personal responsibilities. Target setting, task planning, task and role clarity as well as coordination improvements were positively perceived by subordinates who reciprocated the efforts. The lack of personal interaction is not yet affecting performance but is reportedly missing. The same applies for a sense of belonging to the team.	The high level of flexibility, clear target setting, task planning, task and role clarity and coordination improvements positively impacted subordinates' performance. Subordinates appreciated the possibility to align their work schedule to personal responsibilities. Personal interaction and a sense of belonging to the team is missing, but not yet impacting performance.

17	E1	One challenge associated with the virtual environment is the risk of burn out. Subordinates spend 10 to 12 hours in front of MS Teams meetings with almost no breaks in between. This is challenging for the organization as well as the subordinates individually. It is necessary to adapt to this new environment by blocking time slots in their calendar. Employees reported that they felt the need to switch to their mobile devices to use the bathroom and not leave the meetings. Prior to the pandemic meetings were held in conference rooms and coffee as well as lunch breaks were ensured. The number of virtual meetings has increased to an extent that employees spend 12 hours in front of their computer. This poses a big challenge for the team as well as the organization itself. Topics that would usually be discussed within a couple of minutes in the office are now extended to thirty-minute digital meetings. A good software is necessary in order to allow a remote or hybrid to function in the future.	One challenge associated with the virtual environment is the risk of burn out. The number of virtual meetings has increased to an extent that subordinates spend ten to twelve hours in digital meetings with almost no breaks in between. It is crucial to block time slots in the calendar. Coffee breaks and lunch breaks that were ensured prior to the pandemic are reportedly missing. Topics that would be discussed within two minutes in the office are now extended to thirty minutes digital meetings. A good software is thus needed for the future if a remote or hybrid working situation remains.	Risk of burnout increases in virtual environment. Number of meetings too high. Subordinates spend ten-twelve hours in virtual meetings, almost no breaks. Coffee and lunch breaks missing. Blocking free time slots in calendar is crucial. Time needed to discuss topics has multiplied. Leaders need to be more deliberate in deciding who must attend what meeting. Having virtual meetings increases stress level about twenty-thirty percent. Biggest threat is burnout.
18	E1	Deliberation regarding the question who needs to attend a meeting is an important issue. This posed a challenge prior to the pandemic as well, but the extent only increased now in a virtual environment. Having the meetings digitally increased the stress level. The leader R2 assumes that it is twenty to thirty percent more challenging for employees compared to having meetings in an office. For the future the biggest threat could be that employees do not realize in time that the stress level is too high and risk a burnout. This poses a big risk for organizations.	Thoughtful planning and deliberation are necessary to decide who needs to attend a meeting. This posed a challenge prior to the pandemic as well, but the extent increased with the virtual environment. Having meetings digitally increases the stress level. It is twenty to thirty percent more challenging to have the meetings virtually. The biggest future threat could be if employees do not realize in time that the stress level is too high and risk a burnout.	
19	E2	The respondent admits that his/her self-management skills could improve referring to structuring the work. Moreover, the respondent claims that this is a very important aspect that needs consideration particularly in the current situation as working model was not adapted to the current virtual environment. This would cause problems in the future if not addressed. The team and the respondent are however trying to find new approaches.	Self-management skills are an important aspect, which the respondent him/herself would need to improve. It is crucial to find new working approaches as the situation has changed but the way of working remains the same. This needs adaptation in the near future.	Self-management skills are important. It is important to find new working approaches as the situation has changed but the way of working remains the same.
20	E3	It is important to find working conditions and solutions that work for the individual. Some subordinates feel comfortable working in a virtual environment full time which reflects in the performance. Other subordinates have higher needs to work in the office together with colleagues. To increase performance, it is necessary to build a framework that aligns with the needs of the team members. One option is to determine one day a week where attendance in the office is mandatory to discuss topics that concern the team and on the other days subordinates could decide more freely if they prefer working from home or in the office. It is important that the indi-	The needs and preferences of subordinates vary. Some team members prefer working from home, which reflects in their performance. Others prefer working in the office. To increase performance the individual as well as the team needs must be considered. A framework is needed for instance by determining one day a week when attendance in the office is mandatory.	The needs and preference of subordinates vary. While some team members prefer working from home and are highly efficient working remotely, others prefer working in the office. To increase performance the individual as well as the team needs must be considered.

		vidual as well as the team needs are considered.		
21	F1	The personal environment of most individual team members positively contributed to the psychological well-being throughout the crisis. Moreover, the active processing and sharing of similar experience with other team members for instance the challenges related to homeschooling, helped. Therefore, psychological distress is not a present challenge for the team and is thus not affecting the performance. There are of course exceptions for instance if a child is ill, but this temporary and unrelated to the pandemic. On a company level this problem has gained attention as some cases of burnout appeared.	The personal environment of team members positively contributed to their psychological well-being. The sharing of joint experiences within the team such as homeschooling further helped in the situation. Psychological distress is thus not a challenge and not affecting performance. On the company level however cases of burnout appeared.	No effect on performance. The personal environment as well as sharing experiences (e.g., homeschooling) with colleagues helped to cope. On a company level cases of burnout appeared.
22	F2	As part of the individual leadership style the respondent has always tried to combine personal and professional relationships or not to set boundaries between both. Talking about personal lives and sharing private experiences has always been part of the team culture. This culture and personal relationships between team members and the team leaders helped throughout the crisis. It was therefore not a change of leadership style. The respondent places an emphasis on being authentic and not creating a business personality apart from his/her private personality. Having an open amicable relationship with team members helped however to cope with the stress of the crisis by sharing experiences and problems for instance situations at home with the family.	The respondent places an emphasis on being authentic and not creating a business personality apart from his/her private personality. Talking about personal lives, sharing experiences and anecdotes has always been part of the team culture. Thus, it cannot be considered a change of leadership. Yet, the culture and amicable relationships within the team helped to cope with the stress of the crisis by sharing experiences and problems e.g., situations at home.	Talking about personal lives and sharing anecdotes created open amicable culture in team that helped cope with the stress (e.g., sharing experiences and problems). Team had created safe room to allow sharing of feelings and needs.
23	F2	Having established amicable relationships with the team members prior to the crisis helped. The team had established a safe room prior to the pandemic that allows everyone to share their feelings and their needs and not having to pretend to feel well.	Having established amicable relationships within the team prior to Covid helped. The team had created a safe room that allows everyone to share their feelings and needs.	

Appendix 9: Content Summary Analysis Transcript R3

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R3 oversees three subordinates.	The leader R3 oversees three subordinates.	3
2	A2	The concept of different leadership styles is very theoretical. In practice, you act authentic when you start leading a team and not gear towards theoretical concepts. It is difficult to assign oneself to one specific style. Laissez-faire for instance is very drastic. The leader R3 uses a rather relaxed leadership style. From previous experience with different leaders throughout the working life, the respondent R3 found that cooperation was best when employees were trusted and had more freedom and flexibility. The same can be	The concept of leadership styles is theoretical. In practice leaders tend to act authentic and not gear towards theoretical concepts, thus it is difficult to assign oneself to one specific style. Laissez-faire is rather drastic. The leader R3 uses a relaxed leadership style, as he/she gathered from previous experiences that cooperation is best when employees are trusted and have more freedom and flexibility. The same can be seen in the current team.	In practice leaders tend to act authentic and not gear towards theoretical concepts (e.g., leadership styles). Assigning oneself to a specific style is thus difficult. The leader R3 uses a relaxed style, as he/she gathered from previous experience that cooperation is best when employees are trusted and have more freedom, flexibility.

		seen in the current team.		
3	A3	It is difficult to measure performance through instruments such as motivation or rewards. Gathering feedback from subordinates is thus a useful measure to gain insights into the performance. The leader R2 started leading the team in March/April 2021. Thus, the respondent started his leadership position amid the Covid pandemic working fully remotely. Consequently, it is difficult to determine the performance under these circumstances. Yet, from the feedback gathered it seems that the leadership style and behaviour positively impact the performance. However, it also depends on the individual needs of subordinates. So far, the leadership efforts including offering trust and freedom are reciprocated by the subordinates through performance.	Measuring performance through motivation and rewards is difficult. Feedback is therefore a useful measure to gain insights into the performance. The leader started leading the team during the Covid-19 pandemic thus working fully remotely. Consequently, determining the performance is difficult, yet the feedback indicates that the leadership style positively impacts performance. This also depends on the individual needs of subordinates. So far offering trust and freedom to employees is reciprocated through performance.	Feedback is a useful measure to gain insights into performance. The leader R3 started the leadership position amid the pandemic, thus working remotely which makes it difficult to determine the performance. Feedback indicates that the leadership style positively impacts performance through offering trust and freedom to employees.
4	B1	There is always a certain distance when taking over a new team, particularly in the current crisis. The leader R3 has not yet seen all the subordinates in person especially those who only recently started working in the team. It is therefore a challenge to give subordinates an understanding of the leadership style not just remotely but on a more personal level. There have not been negative consequences in form of performance decreases even in very stressful situations. Other impacts are difficult to determine as the respondent R3 started his assignment amid the crisis and can thus not draw a comparison to pre-Covid.	There is a distance between leader and subordinate when taking over a new team, especially in the current crisis. Working remotely from home has prevented to personally meet some of the subordinates in the office. Thus, giving subordinates an understanding of the leadership style is challenging. There have not been negative consequences in form of performance decreases even in stressful situations.	When taking over a new team, there is a distance especially in the current crisis. Due to remote work the leader has not met all subordinates in person, which makes it difficult to give employees understanding about the leadership style. There have not been negative consequences e.g., performance decreases.
5	B2	Comparing both the subordinate and leader perspective and experiences during the pandemic it can be stated that the communication channels have considerably changed. This started with the digitalization for Office 365. Some communication channels that were common prior to the crisis such as quick chats over the desk and absorbing the team chemistry within the office are currently non-existent. This includes the one-on-one conversations and interactions as well as with more team members. All these small everyday conversations are now held via chats or via MS Teams calls. More and more digital meetings are scheduled, filling the calendar. If the leader R3 wants to speak to two subordinates simultaneously a digital meeting must be scheduled. This adapted usage of communication channels poses a considerable change.	Communication channels have considerably changed. This process started with the digitalization for Office 365 and only increased during the pandemic. Communication channels that were common prior to the crisis such as quick chats over the desk are currently non-existent. This includes the direct personal interaction and conversation with subordinates one-on-on or with more team members simultaneously. All these personal interactions are held via chat or MS Teams calls. More digital meetings are scheduled, filling the calendar.	Communication channels changed. Process started with digitalization to Office 365 and increased during pandemic. Quick chats and conversations in the office, personal interactions are non-existent. All interactions are held digitally (chat, video call). More digital meetings are scheduled. Weekly meetings were installed. Leader R3 contacts each subordinate once a week to ask what is on subordinate's mind and if problems occurred.
6	B2	Short time work only lasted for two weeks in 2020, therefore its effects are negligible.	Short time work only lasted for two weeks in 2020, therefore its effects are negligible.	

7	B2	The leader R3's predecessor initiated weekly team meetings. Once a week a meeting is scheduled with the entire team to discuss current topics. This measure helps the leader to get information and a sense about the individuals current situation. Moreover, the leader contacts each team member individually once a week, if time permits it, to ask specifically about what is on the subordinates' mind and if problems occurred. This is important as issues might arise after the team meeting on Wednesdays that need to be paid attention to before the next team meeting. The weekly team meeting and the direct conversation with each team member via videocall once a week are measures that were implemented.	Weekly team meetings were installed to discuss current topics. This measure contributes to gathering information and get a sense about the individuals current situation. The leader contacts each subordinate once a week to ask specifically if for instance problems occurred. This is important as issues might arise after the team meeting that need to be paid attention to prior to the next team meeting the following week.	
8	B3	Short time work only lasted for two weeks last year; therefore, its effects are negligible. One subordinate with a child was affected by the closure of kindergartens. This posed a challenge as the employee had to work and watch the child as well.[…] The lack of separation between professional and personal life does pose a challenge for the team while working remotely especially for employees who do not have a separate working space in their apartment.	Short time work only lasted two weeks in 2020 therefore its effects are negligible. The team was confronted with challenges concerning childcare during working hours due to the closure of kindergartens. The lack of separation between professional and personal life does pose another challenge for the team while working remotely especially for employees who do not have a separate working space at home.	Short time work only lasted two weeks in 2020 thus effects are negligible. Team was confronted with challenge of childcare during working due to the closure of kindergartens. The lack of separation between professional and personal life does pose a challenge while working remotely from home.
9	B3	Over the course of the pandemic some periods allowed working fifty percent in the office with changing teams. During periods with very high infection rates the staff has/had to work completely remotely from home or their current location.	Over the course of the pandemic the extent of remote work was adapted to the current infection rates. During some periods the staff could work fifty percent from the office with changing teams. During periods with high infection rates the teams have/had to work completely remotely.	During some periods the staff could work fifty percent from the office with changing teams. During periods with high infection rates the teams have/had to work completely remotely.
10	B3	The leader did not notice signs of psychological distress. This is difficult to notice remotely if the subordinate does not communicate the issue. In a normal non-crisis situation higher rate of distress might be easier identified due to the behaviour of the subordinates. Signs of distress are difficult to identify remotely only by hearing the subordinate's voice. The subordinate would have to communicate that he/she is not feeling good.	The leader did not notice signs of distress. If the subordinate does not communicate this issue, it is difficult to notice while working remotely (e.g., only hearing the voice). In a normal non-crisis situation higher rate of distress might be easier identified due to the behaviour of the subordinates.	Leader did not notice signs of distress. Difficult to notice while working remotely, if subordinate does not communicate this. In non-crisis behaviour might be easier to identify. Double pressure for parents is always present. Company is conducting internal surveys and offer help-hotlines to provide internal and external support. Employees should know that they can speak up and seek support. Being vulnerable is no sign of weakness.
11	B3	The double pressure is always an issue for parents, not only in the current situation. If parents are at the office and have to go home to pick up the children from the kindergarten or if the children get sick. Yet, it is not possible to compare the situation as the leader R3 did not oversee the team prior to the crisis. This challenge was however not brought to the leaders' attention.	The double pressure is always an issue for parents (e.g., child gets sick). Yet, the leader R3 cannot compare the situations as he/she did not oversee the team prior to Covid. This challenge was however not brought to the leaders' attention.	
12	B3	The company addresses the topic of psychological distress for instance by conducting internal surveys. The freedom of movement for instance due to lockdown situations is very restricted. The company	The company addresses the topic of psychological distress by offering a wide range of support and conducting internal surveys and offering help-hotlines to provide both internal and	

		moreover has help-hotlines to provide both internal and external support. The company offers a wide range of support. Mental illness and psychological distress are still not widely talked about and accepted by society. Yet, employees should know that they should speak up and seek support if they are not feeling well. Being vulnerable and admitting if one is overwhelmed is not a sign of weakness and it does not put the career on the line. However, it might take some more time until this is internalized.	external support. Mental illness is still not widely talked about and accepted by society, but employees should know that they can speak up and seek support. Being vulnerable and admitting one is overwhelmed is not a sign of weakness and it does not put the career on the line.	
13	C1	Yes, although it depends on the situation itself. If the upper management level for instance exerts pressure to meet a deadline the leadership style adapts from a more relaxed, collegial style to more oversight. This does not necessarily connote to absolute control but rather ensuring that the tasks are fulfilled in time. The adaptation of leadership also depends how much pressure is exerted.	Leadership is adapted depending on the situation. The example of deadlines with high pressure exerted from upper management often entails an adaptation of leadership style from a relaxed, collegial style to more oversight. This does not necessarily connote to absolute control but ensuring that tasks are fulfilled.	Leadership is adapted to situational demands. Deadlines require more oversight, not necessarily control but ensuring tasks are fulfilled. Only situational variables are insufficient. Leadership needs adaptation regarding subordinates. Mixture of situational and relationship-oriented aspects. Yet, relationship is predominant. Some situational changes due not require adaptation. If performance decreases, leader R3 uses a coaching approach.
14	C1	Only taking situational variables into account is not sufficient as the subordinates' individually impact if the leader must adapt the leadership style. Leadership needs to be adapted to situations but the extent depends on the subordinate. Finding examples is difficult, but if deadlines are missed or if performance decreases the leader focuses individually on the subordinate. New tasks change the leadership situation but if the leader has confidence in the subordinates abilities and work results a leadership adaptation is not necessary. Contrarily, if the leader notices performance decreases or higher stress levels due to personal issues, the leader needs to adapt the leadership style even though the situation remains the same. It is a mixture of situational and leader-member relationship aspects. Yet, the individual relationship between leader and employee is predominant as the subordinate delivers the quality of work. If the performance is continuously high independent of situational changes the leader does not need to adapt the leadership style even in situations when upper management levels exert pressure. If the performance decreases the leader uses rather coaching than control to find solutions together.	Taking only situational variables into account is not sufficient. Leadership needs to be adapted to situations but the extent depends on the subordinate individually. New tasks change the situation but if the leader has trust in the subordinate a leadership adaptation is not necessary. Contrarily, if the leader notices performance decreases or high stress levels, the respondent needs to adapt the leadership style even though the situation remains the same. It is a mixture of the situational theory as well relationship-oriented aspects between leader and subordinate. Yet, the relationship aspect is predominant as the subordinate is responsible for quality work. In high pressure situations the leader does not need to adapt the leadership style is performance is stable. If performance decreases the leader uses coaching to find solutions together.	
15	D1	Employees are tempted to work after hours due to the presence of the work equipment. The leader tries to counteract such behaviour by clearly communicating that working from home does not imply being always reachable. This applies for executives as well who in addition to the laptop have a company phone. Thus, childcare and a lack of separation between the private and professional lives are challenges the team faced or still faces.	As employees are tempted to work after hours due to the presence of work equipment the leader clearly communicated that working from home does not mean that employees should be always available. The same applies for executives.	As employees are tempted to work after hours due to the presence of work equipment the leader communicated that working from home does not mean employees should be always available. The same challenge applies for executives.
16	D2	This problem was solved by granting the	The leader solved this problem by	The leader granted subor-

		employees more temporal flexibility to divide up the working hours in accordance with the personal needs. For instance, if the child needed more attention from nine to eleven o'clock than the employee could make up for that time by working in the afternoon or evening. Prior consultation about the arrangements with the leader is necessary so to avoid misunderstandings. In such instances whenever possible the leader tried to accommodate the subordinates needs. These flexible arrangements do pose a challenge as other departments within the company cannot accommodate this flexible working hours. Thus, the leader arranged for an appropriate substitute or distributed the tasks in a way to provide enough flexibility. […] Flexibility is granted to employees especially if other limitations occur. This must be in line with the work situation. When starting his/her career the leader R3 had similar wishes to be able to divide the working hours flexibly. Being now in a leadership position the respondent R3 tries to provide the same flexibility to the subordinates. Thus, a comparison is difficult as the leader has not experienced different approaches.	granting employees more temporal flexibility to adjust their working schedule to their personal responsibilities. Prior consultation about the arrangements are/were necessary to avoid misunderstandings. In order to guarantee accessibility, especially with other departments, the leader provided appropriate substitutions or distributed the tasks in such a way that sufficient time flexibility was available. Flexibility is granted to employees especially if other limitations occur as long as it is in line with the work situation. The leader R3 tries to provide the same flexibility to subordinates that he/she was granted.	dinates more temporal flexibility to adjust their working schedule to fit their personal responsibilities. Prior consultation is necessary to avoid misunderstandings. To guarantee accessibility, especially with other departments the leader provided appropriate substitutions or distributed the tasks. Flexibility is granted to employees especially if other limitations occur as long as it is in line with the work situation.
17	D3	It is difficult to identify behavioural patterns solely via digital communication (e.g., laptop, MS Teams calls). As the leader R3 started the leadership position amid the pandemic a comparison to leadership while working in the office is difficult. Yet, the subordinates appreciate the temporal flexibility. Subordinates reciprocate the freedom and flexibility granted through performance.	Identifying behavioural patterns solely via digital communication (e.g., Chats, MS Teams calls) is difficult. The leader R3 cannot make a comparison to leadership during non-crisis situations. The subordinates appreciate the temporal flexibility and reciprocate the freedom and flexibility granted through performance.	Identifying behavioural patterns solely via digital communication is difficult. The subordinates appreciate the temporal flexibility and reciprocate the freedom and flexibility granted through performance.
18	E1	Complex topics are not discussed via chat. This principle was automatically applied. To discuss complex matters, the method of choice is calling, which makes it easier than only using the chat. Moreover, how the team functions is important. The leader R3 has not yet personally met one of the subordinates as she/he started their employment in December during the Covid-19 pandemic. This had implications for the training of the new subordinate, as it is not possible to come together and explain the different tasks within the office. In non-crisis situations the training process is different. Yet, it worked out well. Therefore, some of the challenges are the same as in non-crisis situations. One challenge that is however new refers to the performance appraisal while working at a distance. In general, performance appraisals are held twice a year. The last one was conducted one and a half month ago. Grasping how subordinates embrace the company's values is difficult while working remotely. Yet, this is strongly impacting the performance appraisal. The leader R3 can thus only rely on work results and cannot incorporate how communication takes place in	Complex topics are discussed via phone not via chats. The leader R3 has not met one of the team members personally due to the current remote situation. This has had implications for the entire training process. Yet, it worked out well. Some challenges are the same as in non-crisis situations. One new challenge revolves around performance appraisals while working remotely. Grasping how subordinates embrace the company values is currently difficult. Yet, this usually strongly impacts the performance appraisal. The leader R3 can thus only rely on the work results and not incorporate how communication in general takes place.	Complex topics are discussed via phone. The leader R3 has not met one of the subordinates personally which has had implications for the entire training process. One new challenge revolves around performance appraisals while working remotely. Grasping how subordinates incorporate company values is currently difficult, yet it is usually very important. The leader R3 can only rely on the work results and not incorporate how communication takes place.

		general.		
19	E2	The leader R3 started the leadership position amid the pandemic therefore he/she did not have to adapt to the current situation as much. Adaptation is rather important concerning general team goals, internal functioning etc. The leadership style did not have to be adapted.	The leader R3 did not have to adapt to the current situational demands as much, as he/she started during the pandemic. Adaptation is important concerning general team goals, functioning etc.	Adaptation of the style to situational demands was not necessary. Adaptation is important concerning general team goals, internal functioning etc.
20	E3	Like the previous answers. It is not possible to compare to the non-crisis situation therefore it is not possible to draw a conclusion.	No comparison to non-crisis situation. Therefore, not possible to draw a conclusion.	No comparison to non-crisis situation. Therefore, not possible to draw a conclusion.
21	F2	The leader can only ask employees how they are feeling, and it is up to the subordinate if they want to share when they are not feeling good. During personal face-to-face interactions it might be possible to notice signs due to facial expressions and gestures. If a subordinate however does not want to share if they are not feeling well, the leader cannot help.	The leader can show interest by asking how a subordinate is individually feeling. Yet, it is up to the subordinate to communicate when there is a problem. If the subordinate does not want to share that, the leader cannot help. In face-to-face interactions is might be easier to notice signs due to facial expressions and gestures.	The leader can show interest by asking, yet it is up to the subordinate whether they want to share that there is a problem. If they do not the leader cannot help. Face-to-face interactions might make it easier to notice signs (e.g., facial expression).

Appendix 10: Content Summary Analysis Transcript R4

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	Currently the leader R4 oversees two subordinates. In the past the respondent supervised 23 employees in a team.	Currently the leader R4 oversees two subordinates.	2
2	A2	The leader R4 describes the leadership style as a combination between transformational and transactional depending on the level of experience the subordinate has. Employees at the beginning of their career need more supervision in the form of more directive instructions and active control. Yet, this only applies in the beginning as it is important that employees develop motivation and initiative. Then, a more relaxed style in a sense of coaching and mentoring the subordinates is applied. Feedback plays an essential role as it provides the opportunity for learning.	The leader R4 applies a combination of the transformational and transactional leadership style depending on the level of experience. At the beginning of the career subordinates' need more supervision, directive instructions and active control. Later, a more relaxed style in form of coaching and mentoring is applied to ensure motivation and initiative. Feedback plays an essential role.	A combination of transformational and transactional depending on the level of experience. At the beginning of a career subordinates' need more supervision, directive instructions, active control. Later, a more relaxed style (coaching, mentoring) is applied to ensure motivation, initiative. Feedback is essential.
3	A3	It is essential that employees feel comfortable in their working environment, make positive experience and develop interest to get involved. The leader encourages subordinates to introduce new ideas, feel empowered and trust their instincts. The leader R4 does not dismiss new ideas even if the idea is not convincing from the beginning. Rather the leader R4 tries to develop the idea together with the employee and build on it. This can positively impact performance.	Feeling comfortable in the work environment, making positive experiences and developing interest to get involved is essential. Thus, the leader encourages subordinates to introduce new ideas and feel empowered. If new ideas are not convincing from the start the leader does not dismiss them but tries to build on them together with the employee. This can positively impact performance.	Feeling comfortable, making positive experiences and developing interest is essential. The leader encourages to introduce new ideas and feel empowered. New ideas are not dismissed even if they are not yet convincing but build on together. This positively impacts performance.

4	B1	Crises impact the relationship between leadership and performance as well as the relationship between leader and subordinate. Oftentimes in crisis situations unpopular restrictions are enforced that leaders must implement on the various levels. As these are usually top-down decisions leaders cannot include their subordinates in the decision-making process and act participatively. Even if the leaders themselves question the restrictions, they must be implemented, and the purpose of the measures needs to be communicated to subordinates. This is particularly important in economic crises as they often entail staff reductions. While working in Brazil, the leader R4 experienced layoffs more than once and knows how difficult it is. Performance within teams decreases as the relationship between the environment, motivation and performance cannot be underestimated. The tension in the environment has a direct impact on performance.	Crises impact the relationship between leadership and performance and the relationship between leader and subordinate. Unpopular restrictions must be implemented and as these are usually top-down decisions, leaders cannot use a participative leadership style. The measures must be enforced, and the purpose needs to be communicated. This is especially important in economic crisis that e.g., entail lay-offs. This is a difficult situation as the tension in the environment directly negatively impacts performance. The relationship between environment, motivation and performance cannot be underestimated.	Crises impact relationship between leadership and performance. Unpopular restrictions must be implemented. Sharing information and communicating purpose of measures is crucial. Employee's demand and deserve to know why measures are implemented. This can positively impact motivation to help overcome crisis. Ensuring that remaining employees do not feel to demotivated is crucial. Tension directly negatively impacts performance. Relationship between performance, motivation and environment can not be underestimated.
5	B1	Communication and information are very important to explain to employees the different measures. Employees demand as well as deserve to know why certain measures are implemented. This can even positively impact the team motivation to help overcome the crisis. Yet, the employees need to know the "why". It is important to ensure that during layoffs the remaining employees do not feel too demotivated.	Communication and information are very important. Employee's demand and deserve to know why certain measures are implemented. This can positively impact the team motivation to help overcome the crisis. Ensuring that during layoffs the remaining employees do not feel too demotivated, is crucial.	
6	B2	Not too much has changed in the team. The relationship between leader and subordinates was good and stable going into the crisis. […] Before the crisis communication was much more direct, being in the same location.	Not too much has changed in the team. […] The relationship between leader and subordinates was good and stable going into the crisis. Communication prior to Covid was much more direct.	Relationship between leader and team was good going into crisis. Communication and interaction used to be easier, more direct and personal. Team did adapt well to new conditions. Increase in efficiency due to elimination of commute. Once a month on-site meeting, used for long planning sessions.
7	B2	Prior to the pandemic communication was easier and interactions more personally. During the pandemic only digital tools like MS Teams or Skype can be used. The team adapted to the new conditions very well. It never happened that a task was not finished due to a lack of communication.	Communication and interactions were easier and more personal prior to Covid. The team did adapt well to the new conditions (e.g., using digital tools). Not once was a task not finished due to a lack of communication.	
8	B2	The leader R4 noticed that subordinates have become more efficient due to the elimination of the commute. The leader R4 commutes between two to four hours a day. This time can be efficiently used to increase production.	The leader R4 noticed an increase in efficiency due to the elimination of the commute. The time spend commuting can now efficiently used to increase productivity.	
9	B2	The team does not meet personally regularly but usually at least once a month. These on-site meetings are used for planning sessions that take a lot of time. Even though it could be held via Skype or Teams it is more comfortable on-site due to the length of the meeting.	The team meets at least once a month on-site. The meetings are used for planning sessions that take a lot of time. It could be held via Skype or Teams but due to the length of these meetings it is more comfortable on-site.	
10	B3	It is difficult to separate personal and	It is difficult to separate personal and	It is currently difficult to

		professional life, especially while working from home. Yet, the leader R4 and the team do not have problems in this regard. […] The subordinates show high motivation and use their time efficiently, yet the employees themselves must ensure the separation between professional and private life. The leader R4 him/herself prefers working at home even though the separation between personal and professional life is not easy.	professional life, especially when working from home. Yet, it does not pose a challenge as subordinates show high motivation and use their time efficiently. Performance is increasing.	separate personal and professional life. Yet, it does not pose a challenge as subordinates show high motivation and use their time efficiently.
11	B3	The team is now communicating virtually, via Skype, MS Teams, phone or mail.	The team is now communicating virtually via Skype, Teams, phone or mail.	Virtual communication via Skype, Teams etc.
12	B3	No psychological distress on employees was detected. Rather the opposite.	No psychological distress on employees was detected.	No psychological distress on employees was detected.
13	C1	The leadership style is generally very internalized. Yet, depending on the situation the style needs to be adapted. Examples for such situations are new tasks, restructurings, top-down decisions. Regarding the implementation of top-down decisions leader R4 uses a more directive approach. When taking on new tasks more support and supervision is needed. Other than that, the usual leadership style can be applied in form of coaching. The coach maintains a constant stream of communication, provides feedback and takes the needs of subordinates into consideration. If performance decreases the leader R4 investigates to determine the reasons, aiming at helping the subordinate. Personal interactions are very important.	The general leadership style is internalized yet depending on the situation the style needs to be adapted. Examples are new tasks, restructurings and top-down decisions. Implementing top-down decisions requires a more directive approach. Taking on new tasks demands for more support and supervision. The general leadership style is coaching maintaining constant stream of communication, providing feedback, taking needs of employees into consideration. Investigating the reasons if performance decreases to help subordinates. Personal interaction is very important.	The leadership style is internalized, depending on the situation it needs to be adapted. Examples: new tasks, restructurings, top-down decisions. The last example would require a more directive approach. New tasks demand for more support and supervision. In general coaching leadership style: maintaining stream of communication, providing feedback, taking needs of subordinates into consideration. Investigating reasons if performance decreases to help subordinates. Personal interactions are important.
14	D1	Performance is not decreasing, but rather increasing. […] The team worked on a project with high time pressure last year. During this time the leader worked up until ten o´clock at night as he/she did not notice the time passing. This would not have happened when working at the office. Working this late should be avoided. Other than that, no negative effects were noticed due to the changed working conditions. The lack of separation between personal and professional life has not had a negative effect.	Performance is increasing. […] Due to a project with high time pressure the leader R4 worked some nights up until ten o'clock. This would not have happened when working at the office. Working this late should be avoided. Other than that, no negative effects due to the changed working conditions were noticed.	Performance is increasing. […] Leader himself worked during challenging project up until ten pm. This should be avoided. MS Teams facilitates contact and is preferred channel of communication. Reachability issues occurred in the beginning due to varying working hours. After consultation, this no longer presents a problem.
15	D1	Working with MS Teams facilitates the communication as the leader R4 can contact the subordinates easily. Even though Skype or calling via phone are also options MS Teams is the preferred communication channel. Skype will soon be deactivated. In the beginning some reachability issues occurred as some subordinates started working later than others. Thus, the leader tried to contact subordinates when they were not yet working. After consultation this is not an issue anymore.	Working with MS Teams facilitates the contact and is the preferred channel of communication. Some reachability issues occurred in the beginning due to different working hours. After consultation this no longer presents a problem.	

16	D1	The reachability in the beginning needed consultation between the leader and the team members. Now reachability is not a problem.	Reachability needed consultation in the beginning. Now reachability is not a problem.	
17	D2	The leadership style itself did not change. When training a new intern, a rather directive leadership style with more supervision is required, including more virtual meetings. This is however normal when starting a training process. The leadership style is thus only adapted to the situation.	The leadership style itself did not change. In a training situation with a new intern a directive leadership style with more supervision and virtual meetings is required. The leadership style is thus only adapted to the situation.	The style itself did not change. Training a new intern demands a directive style with more supervision and meetings. The style is thus adapted to the situation.
18	D3	This positive effect is what the leader R4 experienced so far.	This positive effect is what the leader R4 experienced so far.	This positive effect is what the leader R4 experienced so far.
19	E1	Disruptions regarding the digital systems do occur. Sometimes meetings are disrupted and must be cancelled or resumed later. This happened multiple times. Once in a very important meeting with the executives of leader R4 internet problems occurred while the leader presented the new project. This was a very important meeting, but one has no influence.	Disruptions regarding digital systems have occurred multiple times. Sometimes meetings are disrupted and must be cancelled or resumed later.	Disruptions in digital systems occurred several times (e.g., disrupted meetings). Personal interaction is missing. Communication takes longer. Scheduling and organizing meetings eliminate problem.
20	E1	The team does miss the personal interactions. Writing e-mails for instance does take longer or the leader R4 must wait until the subordinate is reachable. Thus, it does take more time to communicate. Yet this is not a problem as the necessary precautions are taken including organizing and scheduling meetings and communications in advance. All can be reached in specified time windows.	The team misses personal interactions. Writing e-mails or waiting until someone is reachable takes more time. Yet, scheduling and organizing meetings and communications in advance eliminates this problem.	
21	E2	The leader R4 tries to hold a meeting every day to ensure the sense of belonging to the team. The leader R4 tries to involve the subordinates in the decision-making process, even for smaller decisions. This inclusion is important as well as increased communication to keep subordinates informed.	Every day, if possible, a meeting takes place to ensure a sense of belonging to the team. Subordinates are involved in the decision-making process, even for smaller decisions. Inclusion and increased communication are crucial to keep subordinates informed.	Daily meetings shall ensure a sense of belonging to the team. Subordinates are involved in the decision-making process. Inclusion and increased communication are crucial to keep subordinates informed.
22	E3	It is important to have clear and increased communication using the digital tools (MS Teams etc.) available while working from home. A better and increased use of the communication channels is crucial.	Clear and increased communication using the digital tools available while working from home is crucial.	Clear and increased communication using the digital tools available while working from home is crucial.

Appendix 11: Content Summary Analysis Transcript R5

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R5 oversees seven subordinates directly. The subordinates manage teams themselves, thus in total seventy subordinates are in the leader's management influence. The Human Resource Department oversees approximately 3000 employees.	Directly the leader oversees seven subordinates. Seventy employees in total are under the leader's leadership influence.	Directly 7. In total 70

2	A2	The leader has a background a therapeutic and coaching background as a systemic consultant. Thus, the leader focuses on coaching and empowering employees. The leader describes the leadership style as a transformational style with participative and empowering elements and with a special emphasis on coaching.	The leader focuses on coaching and empowering employees. The leadership style is a combination of a transformational style with participative and empowering elements and a special emphasis on coaching.	Focus on coaching and empowering employees. Combination of transformational style with participative and empowering elements. Special emphasis on coaching.
3	A3	The type of leadership facilitates long-term performance increase. The leader R5 distinguished between performance and potential. Performance describes the current ability to perform, while potential refers to the expected performance increase in the future. Thus, the chosen leadership style strongly impacts the exploitation of potential and performance increase. It is not sufficient to solely focus on the short-term performance. It is crucial to analyse how the leader could positively impact the future performance of employees. The leader R5 therefore follows a potential oriented view trying to challenge subordinates to work better and differently.	The type of leadership facilitates long-term performance increase. Performance describes the current ability to perform. Potential refers to the expected performance increase in the future. The chosen leadership style strongly impacts the exploitation of potential and performance increase. It is not sufficient to solely focus on the short term-performance, but rather follow a potential oriented view.	The type of leadership facilitates long-term performance increase. Performance is the current ability to perform. Potential is the expected performance increase in the future. The chosen style strongly impacts the exploitation of potential and performance increase. Focusing on short-term performance is not sufficient, rather apply a potential-oriented view.
4	B1	In a crisis, mistakes weigh more heavily compared to non-crisis situations. A crisis is usually defined by a lack of time and high pressure. Mistakes from subordinates as well as dysfunctional leadership behaviour becomes apparent promptly. Thus, a crisis helps to identify efficient and inefficient leadership. Moreover, a crisis can present an opportunity to improve leadership as the lack of time and the high density of topics requires faster, sequential decisions. This enables learning effects and a high impact of leadership.	Mistakes weigh more heavily in crisis situations, as a crisis is usually defined by a lack of time and high pressure. Mistakes and dysfunctional behaviour become apparent promptly. A crisis helps identify efficient and inefficient leadership but also presents an opportunity to improve leadership as the lack of time and high density of topics requires fast decisions. This enables learning effects and a high impact of leadership.	Mistakes weigh more heavily in a crisis, as crises are defined by a lack of time and high pressure. Mistakes and dysfunctional behaviour become apparent promptly. Crises help identify (in-)efficient leadership and present an opportunity to improve leadership as the lack of time and the high density of topics require fast decisions. This enables learning effects.
5	B2	The team works completely remotely. The leader R5 has only twice seen two subordinates that were hired over a year ago. The head office of the company is in Cologne and the leader R5 commutes back and forth between Hamburg and Cologne. The team is dispersed in Cologne, Barcelona and Paris meaning that the team is currently working completely remotely together. The last team on-site meeting was one and a half years ago. Moreover, the team had to conduct a restructuring, manage health management including hygiene measures and manage short-time work. Thus, the team has gained a lot of crisis experience. The team works completely remotely and all in all the team is overworked as there is a lack of recovery periods. This has changed tremendously.	The team works completely remotely and is dispersed in Cologne, Barcelona and Paris. The last on-site team meeting was one and a half years ago. The leader has only twice seen two subordinates that were hired a year ago. The team had to conduct a restructuring, manage health management including hygiene measures and manage short-time work. The team has gained a lot of crisis experience. Yet, the team is overworked as there is a lack of recovery periods.	Team works completely remotely and is located in three European cities. Last on-site meeting was prior to crisis. Leader met two subordinates only twice that were hired a year ago. Team had conducted a restructuring, managed health management and manage short-time work. Team gained crisis experience but is overworked. Measures to prevent burnouts: Timeouts, strengthening resilience, promote employees to disconnect, focus on specific topics

6	B2	Further measures that were implemented to adapt to the current crisis are: timeouts, strengthening resilience, enabling subordinates to disconnect and focusing on some specific topics. This includes more prioritizing and structuring this process. These were measures implemented to prevent burnouts.	Measures that were implemented to adapt include timeouts, strengthening resilience, promote employees to disconnect, focus on specific topics. Structure the prioritization of topics. These measures were implemented to prevent burnouts.	
7	B3	The working situation was particularly in the beginning of the crisis tremendously impacted by the closure of schools and kindergartens. […] This impacted the team, which works in Human Resources, tremendously as the demands have extremely increased yet the conditions have become very difficult. For some employees short-time work was a relief as it implied less pressure. Yet even though in various departments the professional pressure decreased, the personal challenges increased vastly.	The working situation was tremendously impacted by the closure of childcare facilities. […] The demands have extremely increased, yet the conditions have become very difficult. In some departments the professional pressure decreases (e.g., due to short-term work), yet personal challenges increased vastly. For the team (HR) of the leader R5 both applied.	Closure of childcare facilities impacted the work situation tremendously. […] The demands have increased extremely, the conditions have become very difficult. For some, the professional pressure decreased (e.g., short-time work), yet the personal challenges increased.
8	B3	The team works completely remotely.	The team works completely remotely.	The team works remotely.
9	B3	This increased the stress level of employees tremendously. Many subordinates showed clear signs of emotional distress during meetings because the burden became too great. […] High levels of psychological distress are a current challenge. The company works together with an external family service organization that provides help for employees. Concerning employees that are immensely burdened it is discussed what measures can be taken to decrease the stress level. This includes internal measures through leadership and internal as well as external counselling. The company and the team created a culture where everyone shall feel safe to discuss issues concerning psychological distress. The term and concept of psychological safety was introduced prior to the crisis and has since been referenced particularly now in the current climate. The company conducted a psychological risk assessment in form of a survey of all employees to identify stress indicators that can be counteracted.	Many subordinates showed clear signs of emotional distress, being overwhelmed with the situation. […] High levels of psychological distress are a current challenge. The company implemented different measures to unburden employees such as providing internal counselling or using adapted leadership as well as providing external family services. The company created a culture where everyone shall feel safe to discuss issues concerning psychological safety. This term and concept have become increasingly important in the current crisis. The company conducted a psychological risk assessment in form of a companywide survey to identify and lastly counteract stress indicators.	Many subordinates showed clear signs of emotional distress (e.g., crying). […] Psychological distress is a current challenge. Different measures implemented (external family services, internal counselling, adapted leadership) to unburden employees. Concept of psychological safety in the company's culture to promote principle that talking about psychological distress is desirable. Increasingly important during the pandemic. A psychological risk assessment conducted to identify and counteract stress indicators.

10	C1	The leader needs to adapt the style to situations. If a subordinate deviates too much from the expectations and specifications, an empowerment leadership is not the right approach. In this instance the subordinate already feels empowered and rather needs a clear structure and instructions, if necessary, including penalties. Occasionally clear boundaries need to be set through a more directive leadership style. If the subordinate, in this case a manager him/herself, is insecure and uncertain, the leader R5 must take other means. The context, the topic, the individual role and experience are therefore important to determine the right leadership style in a situation. The needs of subordinates in the individual situation must be considered. If a subordinate is very insecure it might be more helpful to offer a clear instruction and solution otherwise the insecurity and uncertainty might increase particularly in an environment that due to the crisis is determined by uncertainty itself.	The leader R5 needs to adapt the style to situations. An empowering leadership style would be the wrong approach for a deviating subordinate. A more directive style with a clear structure, instructions and occasionally penalties would be better suited. The context, the experience, the topic and individual role are crucial to determine the best leadership style in a certain situation. If a subordinate is very insecure and uncertain it might be more beneficial to offer clear solutions particularly in an environment that is currently determined by uncertainty.	Deviating employees require more directive approach, with clear instructions and occasionally penalties. Insecure subordinates might need clear solutions if environment is uncertain. Context, topic, experience and individual role must be considered. Performance would otherwise be unsatisfactory. Styles need to be adapted to situations. Such measures (e.g., deadlines) require no discussion and solely implementation. This can unburden employees.
11	C1	Performance would be unsatisfactory is the leadership style is not adapted. If the leader does not give clear instructions to a very insecure and uncertain subordinate the resulting learning experience would not be helpful.	Performance would be unsatisfactory if the leadership style is not adapted.	
12	C1	Yes, deadlines and other external situational demands require an adaptation of the leadership style. Deadlines or other measures dictated by the upper management often imply no discussion and simply implement the actions. This can unburden employees as it takes away the responsibility of making decisions.	Deadlines and other external situational demands require an adaptation of the style. Such measures dictated by the upper management often require no discussion and simply the implementation of actions. This can unburden employees as it takes away the responsibility of making decisions.	
13	D1	For the team of leader R5 both the personal as well as the professional challenges skyrocketed. This negatively impacted the working situation, which required an adaptation of the leadership style.	This negatively impacted the working situation, which required an adaptation of the leadership style.	For the team of leader R5 both challenges skyrocketed, negatively impacting the working situation.
14	D2	The leader R5 adapted the content agenda to stop projects that could be suspended to focus on the crisis management and reduce the burden. Secondly, the leader R5 adapted the message to employees. The leader R5 communicated clearly that subordinates should take time off, reduce overtime if possible. The focus was on supporting the organization of work to strengthen resilience as well as actively listening to the needs and be there for employees.	The leader R5 adapted the content agenda, stopping projects that could be suspended to reduce the burden and allowing to focus on the crisis management. Secondly, the leader R5 adapted the message to employees, communicating clearly that subordinates should take time off and reduce overtime if possible. The focus was on supporting the organization of work to strengthen resilience as well as actively listening to the needs and simply being there for employees.	The style needed to be adapted. The leader R5 adapted the content agenda, stopping projects that could be suspended to decrease the burden. The leader R5 clearly communicated to subordinates to take time off, reduce overtime, if possible, etc. Focus on supporting the organization of work to strengthen resilience, actively listening to the needs and simply being there for employees.

15	D3	The relationship between leadership style and performance under the given working conditions was positive as the trust between leader and employees increased. Subordinates noticing the empathy and the recognition reciprocate with higher loyalty. This is not about rewards but refers to the appreciation of subordinates for considering employees needs and listening to their individual situations. That encourages the relationship of trust. Many relationships between subordinates and leader R5 changed during the crisis, working together in high pressure situations. […]	The relationship between leadership and performance under the given working conditions was positive as the trust relationship increased. Subordinates notice the empathy and reciprocate with higher loyalty. This refers to the appreciation of subordinates for considering the needs and listening to the individual subordinate's situation. Many relationships between subordinates and leader R5 have changed from working together under high pressure during the crisis.	Positive performance effect due to increased trust relationship. Subordinates notice empathy and reciprocate with higher loyalty. Refers to the appreciation of subordinates for considering individual needs. Relationships between subordinates and leaders changed due to working under high pressure together.
16	E1	One challenge is that the sense of belonging to a team cannot be conveyed virtually. Thus, the leader installed team meetings to focus on this social aspect of belonging. Yet, virtual meetings could not fully compensate for the lack of personal exchange. The leader introduced one-on-one meetings in the evening in a social, informal setting with a beverage. This should compensate for conversations that would normally take place in the office, during lunches or coffee breaks. Virtual lunches were as well implemented in changing groups of four. Thus, the leader and the team tried to compensate for aspects of work that are currently missing due to the virtual environment. The individual approach and consideration, including consultation after group meetings was gratefully received by employees. A virtual one-on-one meeting is even more intimate more direct than on-site meetings, as both are very focused on each other.	One challenge is that the sense of belonging to a team cannot be conveyed virtually. Special team meetings were installed to focus on this social aspect. Yet, it could not fully compensate for the lack of personal exchange. The leader also introduced one-on-one meetings in a social, informal setting in the evening. Virtual lunches were implemented with changing groups of four. The individual approach and consideration were gratefully received by employees. A virtual one-on-one meeting might even be more direct and intimate as both sides are very focused on each other.	The sense of belonging to a team cannot be conveyed virtually. Special team meetings were installed to focus on this aspect, yet they could not fully compensate the lack of personal exchange. One-on-one meetings in a social, informal setting in the evening were introduced. Virtual lunches were implemented with changing groups of four. The individual approach was gratefully received by employees. Virtual one-on-one meetings might even be more direct and intimate as both sides are very focused on each other. The relationships have become more personal, as the virtual environment is accompanied by seeing each other personal lives (e.g., pets, children, etc.). A crisis by itself has a bonding effect, now only increased due to virtuality. Previously, teams spent day trips creating artificial stress situations (e.g., rafting) to facilitate team development. This happened naturally during the pandemic.
17	E1	[…] Many relationships between subordinates and leader R5 changed during the crisis, working together in high pressure situations. The relationships have become more personal, as the virtual environment is accompanied by seeing each other's pets, children, spouses and living situation. A crisis considered by itself has a bonding effect, which only increased due to the virtual environment. Prior to the crisis teams spend day trips together, for instance white-water rafting, to create an artificial stress situation that is supposed to have a bonding effect. This form of team development happened naturally during the Covid-19 pandemic.	The relationships have become more personal, as the virtual environment is accompanied by seeing each other private lives (e.g., pets, children, spouses). A crisis by itself has a bonding effect, which only increased due to the virtual environment. Previously, teams spent day trips white water rafting to create an artificial stress situation to facilitate team development. This happened naturally during the pandemic.	
18	E2	The leader R5 adapted the leadership style to the virtual environment. One-on-one meetings are very thoughtfully designed to focus on the specific needs of employees. For instance, a subordinate has high demands of him/herself and works until late in the night demands another leadership approach than a	The leader R5 adapted the style to the virtual environment. One-on-one meetings are thoughtfully designed to focus on the individual and specific needs of employees. The style is moreover adapted to the individual subordinate. For instance, someone who has a high demand of him/herself and is working	The style is adapted to the virtual environment. One-on-one meetings are designed to focus on the specific needs on employees. The style is moreover adapted to the subordinates individually.

		subordinate who is difficult to reach and no one has an idea what he/she is doing. This demands for a clear message to the subordinate to connect with the team and disclose what he/she is working on. Therefore, the leadership is individually adapted.	until late in the night demands another leadership approach than someone who is difficult to reach and does not disclose what he/she is working on.	
19	E3	The leadership style did have a positive effect on performance given the virtual environment due to effective one-on-one meetings and the individual consideration of needs in specific situations. The leader can often recognize patterns that a subordinate is unaware of in the situation. The respondent uses the example of a traffic circle to describe how employees might get stuck and get tired without realizing that they go around in circles. It is the leaders' task to approach subordinates individually and help them break those cycles. The leader can provide individualized solutions for employees that approach the leader with a problem. That immediately increases the performance.	The leadership style positively impacts performance given the virtual environment due to effective one-on-one meetings and the individual consideration of needs in specific situations. The leader can recognize patterns that subordinates might be unaware of. It is the leaders' task to approach subordinates individually and help break these cycles. Providing individualized solutions immediately increases the performance.	Leadership positively impacts performance given virtuality due to effective one-on-one meetings and individualized consideration of needs. The leader can recognize patterns that subordinates might be unaware of. Providing individualized solutions and helping break cycles immediately increases the performance.
20	F1	The performance decreased for some employees due to psychological distress. Other employees used the increased stress level as an incentive which increased performance considerably. The integration of psychological safety has been integrated into the culture supported by the CEO to talk about issues and how one can support another. Therefore, this impacts the leadership style as well. If leaders exemplify this culture and actively communicate that it is desirable to talk about it when someone is overwhelmed or that it is okay to break down in a meeting, this will ultimately have a positive effect throughout the organization. There are several small measures and gestures that can counteract psychological distress, whether it is an informal one-on-one meeting with an alcoholic beverage or as a special example sending a small gift home to the employee after a particularly exhausting meeting.	Performance decreased for some employees due to psychological distress. For other employee's performance increased, using the high stress levels as an incentive. The integration of psychological safety in the company's culture has impacted leadership as well. If leaders exemplify this culture and actively communicate that is desirable to talk about it when someone is overwhelmed or that it is okay to break down in a meeting, this will ultimately have a positive effect throughout the organization. Several small measures and gestures such a one-on-one meeting with a glass of wine after hours can make a difference.	For some employee's performance decreased due to psychological distress, for others it increased using the high stress levels as an incentive. Leadership is impacted as well. If leaders exemplify this culture and actively communicate that it is desirable to talk about it when one is overwhelmed, this ultimately has a positive effect throughout the organization. Several small gestures and measures such as informal one-on-one meetings with a glass of wine after hours, can make a difference.
21	F2	Leadership is thus adapted to focus on the individual needs of employees. The leader analyses where employees stand and what they need. Leadership has various components including clear instructions or using a rather supportive empowerment by asking employees what it is they need.	Individual needs of employees are considered and prioritized. The leader analyses the individual situation before deciding if clear instructions are necessary or a rather supportive environment including asking the employee what he/she needs, if more beneficial.	Consideration and prioritization of subordinate needs. Leader analyses situation before deciding if more directive approach or supportive empowerment is most beneficial.
22	F3	Leadership impacts employee performance. The leader R5 must focus on employees individually as well the current situation. Leading and acting predictable further helps employees to understand and attune to a leader. The interpersonal interaction between leader and subordinate is important. If the em-	Leadership impacts employee performance by focusing on employees individually as well the situation. Leading and acting predictable helps employees to understand and attune to a leader. The interpersonal interaction and way of working together is important. If the employee is aware that	Leadership impacts performance by focusing on subordinates and situations individually. Leading predictable helps employees to attune to a leader. The interpersonal interaction is important. Leadership

		ployee is aware that the leader often asks questions instead of providing a solution, the employee is likely to adapt to asking the questions him/herself and lastly finding the solution on her/his own. Leadership should provide security as well as orientation by adapting the style and behaviour.	the leader often asks questions instead of delivering a solution, the employee is likely to adapt and find solutions on his/her own. By adapting the style, leadership should provide security and orientation.	should provide security and orientation, by adapting the leadership style.

Appendix 12: Content Summary Analysis Transcript R6

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R6 oversees seven subordinates.	The leader R6 oversees seven subordinates.	7
2	A2 + A3	The leader leads by inspiration and close interaction with the subordinates. This includes daily conversations both about the personal and professional lives. The leader supports employees in their professional aspirations, even if that does not always correspond to the company's vision of retaining talents. The company uses reward programs as an incentive to stay with the company. The leader however develops subordinates in a way to prepare them for their professional careers independent of whether it is in the company itself or other organizations in the market. Particularly, because the horizontal growth opportunities in the company are limited.	The leader leads by inspiration and close interaction. This includes daily conversations both about the personal and the professional lives. The leader supports employees in their professional aspirations. The company uses reward programs to incentivize employees to stay with the company. The leader however develops subordinates in a way to prepare them for their professional careers in the market.	The leader leads by inspiration and close interaction, including daily conversations about personal and professional lives. The leader supports employees in their professional aspirations and helps and develops them to be successful.
3	B1	During the financial crisis of 2008 the leader R6 worked in a bank in Brazil. As the financial sector was particularly affected, the company had to downsize considerably. The leader had terminated 2/3 of the team. Inspiring the remaining employees to perform beyond expectations, was crucial. The leader acted as a role model during this time, working 14 hours a day showing employees that everyone, including the executives, must go the extra mile.	The leader R6 worked in bank in Brazil during the financial crisis 2008. The company had to downsize considerably, meaning the leader had to terminate 2/3 of the team. Inspiring the remaining employees and acting as a role model was crucial.	Downsizing was a consequence of financial crisis 2008. Inspiring remaining employees and acting as role model was crucial. Implications of the pandemic contradict leader´s style. Identifying and reacting to problems is difficult due to social distancing and virtuality.
4	B1	The Covid-19 crisis had a stronger impact on the leader R6 as it contradicts his way of leadership. The leader R6 builds close relationships with employees and can thus identify problems through facial expressions and gestures. Once identified, the leader can react. Yet, due to social distancing and working virtually, the leader has trouble identifying and reacting to problems. This is further amplified when employees turn off their camera in meetings or mute their microphone.	The implications of the pandemic contradict the leader's way of leading. Due to social distancing the leader has trouble identifying and reacting to problems (missing facial expressions, body language). This is amplified when employees turn off camera or mute microphone.	
5	B2	Right in the beginning of the pandemic in March, the office was closed because there were suspected cases in the building. Overnight, no one was allowed to enter the office. While the technical prerequisites were there to work from home, the cultural prerequisites were not. The team had to adapt to working	The office was closed in the march due to suspected cases in the building. Overnight, no one was allowed to enter the office. The technical prerequisites to work from home were there, the cultural prerequisites were not. The team had to adapt to working from home. Short-time work was introduced	Closing office in March. Overnight, shift to working from home. Technical prerequisites given, cultural ones not. Short-time work April-July. Team worked 60%. Downsizing was other measure. Leader had to

		from home instead of the office. Short-time work was introduced in April and lasted until July. The extent of short-time work differed. Some teams were only working 10, 30 or 40%. The leaders' team could work 60%.	in April and lasted until July. The team could work 60%.	terminate six employees. Now, positions are being filled again.
6	B2	Downsizing was another measure. Over the course of the pandemic, the leader had to terminate six subordinates. The team is currently consisting of seven employees. Now, that the pandemic situation is easing, positions are being filled again. The leader hopes to reach a number of eleven subordinates. The leader prefers not to manage more than eleven employees, otherwise his leadership style in terms of a close relationship with the employees becomes more difficult.	Downsizing was another measure. The leader had to terminate six subordinates in total. Now, that the pandemic situation is easing, positions are being filled again.	
7	B3	One subordinate has two children, including a new-born baby. The performance would have suffered if the classical work shift would not have been adapted. […]. Another team member moved in with his partner right before the pandemic, which posed another burden.	Various team members faced personal challenges, whether it was childcare related or regarding a change of living situation that burdened the individual.	Short-time work from April-July. Team worked 60%. Distance within the office and sanitary restrictions. Travel restrictions concerned other departments. Different measures taken to allow subordinates to work from home countries. No proper desk chairs at home, thus back pain. Subordinates ordered chairs online and financed chairs themselves. Monitor screen, keyboard and mouse could be moved to subordinates.
8	B3	Short-time worked was implemented in April and lasted until July. The leader´s team was required to work 60% as it is in the core business. Other teams could only work 10, 40 or 40%.	Short-time work from April until July. The team was able to work 60% as it is in the core business.	
9	B3	Other challenges refer to the distance within the office and sanitary restrictions. Bathrooms for instance can only be used by one person at a time. Travel restrictions did not concern the team but other departments within the company. No one was allowed to do business trips. One subordinate wanted to go to his home country India and work from there. The company thus hired a relocation company and worked together with the legal compliance team of the company to help with this temporary relocation as different requirements need to be fulfilled. This includes for instance the insurance. The leader R6 himself travelled and worked from Brazil for a month.	Other challenges refer to the distance within the office and sanitary restrictions. Bathrooms for instance can only be used by one person at a time. Travel restrictions did not concern the team, but other departments. To allow one subordinate of the team to work from India, a relocation company was hired to ensure that all requirements were fulfilled. The leader R6 himself worked from Brazil for a month.	
10	B3	Chairs have presented a challenge when working from home. While in the office good comfortable chairs are provided, most employees did not have proper desk chairs at home. […] Many employees ordered new chairs to work comfortably from home. Employees had to finance this investment themselves. The second aspect concerns the monitors. While in the office every employee has two screen monitors, they could only use their laptop at home. Yet, the leader was able to move the monitors as well as an extra keyboard and mouse to the homes of employees.	Chairs have presented a challenge when working from home. Employees did not have proper desk chairs at home and experienced back pain from working on plain chairs at the dining table. Employees ordered new chairs and had to finance this investment themselves. In the beginning, employees only had their laptops at home. The leader was however able to move the screen monitors as well as an extra keyboard and mouse to the homes of the employees.	

11	B3	The team is working remotely from home.	Virtual environment	Virtual environment
12	B3	Higher psychological distress was noticed by the leader as well as communicated to the leader. Performance decreased because of it.	Higher psychological distress was noticed by and communicated to the leader R6. Performance decreased during the winter season due to signs of depression.	Higher psychological distress was noticed. Isolation due to living alone caused distraction.
13	B3	One team member was impacted by isolation as the partner moved to Ireland to study right before the first lockdown. This team member was distracted due to loneliness.	Isolation due to living alone caused distraction.	
14	C1	It is important to adapt leadership styles to situational demands.	It is important to adapt leadership styles to situational demands.	Styles need to be adapted to situations and employees. Leader R6 uses different styles depending on needs. One might need more attention, patience, another more freedom and self-management. Trust and understanding needs are crucial. Humour, positivity and close interaction are usually tools, the leader uses. Some situations require an adaptation towards more directive approach. Adapting style to situations is not only necessity but can have positive effects to master different styles.
15	C1	Leadership styles need to be adapted to situations as well the employees. The leader R6 uses different leadership styles depending on the individual needs of subordinates. One subordinate currently demands more attention and patience. Another employee with a lot of experience and know-how needs more freedom and space to self-manage. The relationship between leader and subordinates is a two-way street, meaning that a trusting relationship is crucial. Moreover, leader need to understand the individual demands and focus on direct interactions with subordinates.	Leadership styles need to be adapted to situations and employees. The leader R6 uses different leadership styles depending on the individual needs. One employee demands more attention and patience, while another rather experienced employee with a lot of experience and know-how, needs more freedom to self-manage. A trusting relationship, understanding individual needs and interacting directly is crucial.	
16	C1	The leader R6 works and interacts closely with employees. In general, the leader uses humour and positivity to uplift the team spirit. Yet, some situations require an adaptation towards a more directive approach. During the winter 2020 a lot of team members were tired and requested vacations. The performance decreased. The leader was required to communicate broader messages and share the company vision and future directions, in a transparent way. The leader needed to adapt to be more of a boss. This was necessary due to the team situation as well as the external circumstances. The team consists of diverse nationalities, not all of them are used to the cold winters in Austria. Some team members develop depression during the winter season. The leader thus needs to shift the focus and cannot interact as much with the subordinates as usual. Otherwise, the leader would be confronted with too many (illegitimate) complaints which, firstly, he cannot address and secondly, are due to the depressive attitude. Therefore, the leader R6 believes it is necessary to adapt the leadership style to situational demands, not only out of necessity, but because it can have positive effects to master different styles.	In general, the leader uses close interactions, humour and positivity. Yet, some situations require an adaptation towards a more directive approach. During the winter 2020 performance decreased due to higher fatigue and winter depression. The leader was required to communicate broader messages and share the vision, goals and future directions of the company. Thus, the leader needed to shift the focus and could not interact as closely with the subordinates as usual. The usual approach would not have been beneficial during this situation. The leader R6 believes that an adaptation of leadership styles to situational demands is not only a necessity, but it can also have positive effects to master different styles.	
17	D1	Sitting on plain chairs at the dining table for several hours at a time to work has led to massive back pain for many employees.	Employees did not have proper desk chairs at home and experienced back pain from working on plain chairs at the dining table.	No proper desk chairs at home, thus back pain.

18	D1	Different personal challenges relate to availability, making it necessary to look at employees and their respective situation individually.	Personal challenges (e.g., childcare during working hours) related to availability.	Personal challenges (e.g., childcare during working hours) related to availability.
19	D2	The subordinate with small children was able to work two hour shifts throughout the day. The subordinate who was isolated alone worked six hours straight as well as another subordinate who recently moved in with his partner. The leader was constantly chatting and talking to this employee. The leader allowed flexible work shifts to accommodate the different needs of employees.	The leader allowed flexible work shifts to accommodate the different needs of subordinates. One employee with small children worked two hour shifts throughout the day. Others worked six hours straight.	Leader allowed flexible work shifts to accommodate differing needs (e.g., two hours shifts throughout day, six hours straight). Leader acts as role model, assuring to be available for employees who work flexible shifts. Leader always turns on camera and uses humour and positivity to ensure family spirit and visibility. Information is better absorbed through positive communication.
20	D3	The leader acts as a role model. Some team members prefer working early in the morning, others prefer afternoon. The leader is currently every day in the office from 7:00 am to 7:00 pm to be available for all subordinates. Moreover, the leader always turns his camera on and uses humour and positivity to positively impact the team. Information is better absorbed through positive communication. The leader makes jokes, laughs, funny faces all to lighten the mood and ensure friendly family spirit. Even though it is currently difficult to see employees due to virtuality the leader R6 still wants to assure his own visibility so that employees know they can turn to the leader at any time.	The leader R6 acts as a role model. By staying in the office from early in the morning until the evening, the leader wants to assure that he is available for all subordinates, who still work flexible work shifts. The leader always turns on his camera and uses humour and positivity to impact the team and ensure a family spirit. Information is better absorbed through positive communication. Due to the virtuality, it is difficult to see employees, yet the leader wants to assure his own visibility so that employees know they can turn to him at any time.	
21	E1	The team did not have Internet problems, as the connections are very good in the respective homes. One subordinate who only just moved to (CITY) and started her employment did not have an Internet connection at home. The company thus provided Internet to employees until they signed an Internet contract themselves. This however only concerned three or four subordinates in the company.	The team did not have Internet problems. One subordinate who only just moved to (CITY) and started her employment did not have an Internet connection at home. The company provided Internet until the employee had signed an Internet contract herself.	No Internet problems. For employees who recently moved to (CITY) Internet was provided. Team has meetings every morning. Leader noticed communication challenges e.g., facial expressions missing. Leader usually draws during meetings to gather information. Not possible in virtual environment, yet. Meetings take more time and personal interaction is missing.
22	E2	It did not require more communication or more scheduled communication within the team. The team has a meeting every morning together. As the employees are very experienced and independent, they do not need to communicate much throughout the day. The leader R6 did however notice the communication changes and challenges due to the distance. For instance, not being able to walk to someone's desk and see their facial expressions. Moreover, the leader likes to draw during meetings to gather and share the information. In a virtual environment this is currently not possible as a corresponding tool is not available on the platform, yet. The leader R6 misses the personal interactions and notices that meetings take more time in a virtual environment.	It did not require more communication within the team. The team has a meeting every morning together. The leader R6 however did notice communication changes and challenges due to the distance. This includes not being able to walk to someone's desk and see their facial expressions. The leader usually likes to draw during meetings to gather information. In a virtual environment this is currently not possible. The leader R6 misses the personal interactions and notices that meetings take more time.	
23	E3	Trust is a basis for the relationship between the leader and the subordinates. The final performance is critical, so the	Trust is a basis for the leader and team relationship. The final performance is critical, so the leader never	The leader-member relationship is based on trust. The final performance is

		leader never monitored when someone showed up for work for instance. This trusting relationship did not change due to the virtual environment. Usually, the interactions are like prior to the crisis except for a period of performance decrease during the winter season. Yet, the connectivity and interpersonal contact is missing.	monitors e.g., the arrival time at the office. This trusting relationship did not change. Interactions are like prior to the crisis except for a period of performance decrease during the winter season. Connectivity and interpersonal contact are however missing.	crucial, monitoring e.g., arrival time is not necessary. The trust relationship did not change. Interactions are similar except when performance decreases. Connectivity and personal contact are missing.
24	F1	During the winter season employees showed signs of depression leading to a performance decrease. One subordinate that was isolated alone during the lockdown period needed more attention as well.	Performance decreased during the winter season due to signs of depression.	Performance decreased.
25	F2	The leader uses a proactive approach in this regard by trying to foresee challenges and reacting immediately. The leader approaches the employees personally and makes sure to be available. This way the leader tries to prevent the situation from getting worse. If the performance already decreased due to psychological distress, the leader relies on the psychological assistance provided by the workers council. This department provided also valuable advice concerning the working at home situation.	The leader uses a proactive approach, trying to foresee challenges and reacting immediately. The leader approaches employees personally and makes sure to be available. This way the leader tries to prevent a deterioration of the situation. If performance already decreased due to depression, the leader relies on the psychological assistance provided by the company.	The leader uses a proactive approach, trying to foresee challenges and reacting immediately. The leader approaches employees personally. If performance already decreased due to depression, the leader relies on the psychological assistance provided.
26	F2	The pandemic has led to increased isolation and depression. The leader adapted his leadership style accordingly by given clear instructions. Yet, in some situations the leader can only help to a limited extent. The workers council provided support during the pandemic, offering advice on how to decrease stress.	Isolation and depression increased due to the pandemic. The leader adapted the style accordingly by given clear instructions. Yet, the leader can only help to a limited extent. The workers council provided support during the pandemic, offering advice on how to decrease stress.	Isolation and depression increased. The leader adapted the style accordingly by given clear instructions, yet he can only help to a limited extent. The workers council provided support and advice on how to decrease stress.
27	F2 +F3	During the summer season 2020 performance was very good. The leader's style of leadership, designed for personal interaction and contact, led to advantages in the pandemic, as it was possible to draw on the good rapport over the period of distance. The team did not need much help from the leader to perform. The team was very self-managed. During the winter season the leader needed to be more directive as performance decreased. The general mood was bad. The leader R6 himself does not like to use a more directive approach. Since January the performance increased. During the summer season the general mood is good, which impacts the performance positively. The leader R6 needs to be more inspirational and more closely connected during the winter season. The leader still might need to find ways to better handle such situations. If the team is in a good mood, the leader's leadership style works very well.	During the summer season 2020 performance was very good. The leader's style of leadership, designed for personal interaction and contact, led to advantages in the pandemic, as it was possible to draw on the good rapport over the period of distance. The team was very self-managed. During the winter season the leader needed to be more directive as performance decreased. The general mood was bad. The leader needs to be more inspirational and more closely connected during the winter season.	In summer 2020 performance was very good. The team was able to draw on the good relationships formed as a result of the leadership style even at a distance. During the winter season, the leader needed to be more directive, as performance decreased. The leader needs to be more inspirational and more closely connected if performance decreases.

28	F3	The leader uses a proactive approach, trying to foresee challenges. The leader tries to act before a depression has already developed. If performance is stable, the leadership style is working. If performance decreases, the leader reacts. However, the intervention is sometimes successful, yet not always. The leader relies on the workers council assistance regarding the challenge of psychological distress. The leader always tries to proactively prevent underperformance. The leadership style is more successful in keeping performance high than increasing it after a decrease.	The leader uses a proactive approach, trying to foresee challenges. If performance is stable, the style is working. If performance decreases, the leader tries to react. This intervention is sometimes successful, sometimes not. The leader relies on the workers council assistance and tries to prevent underperformance.	The leader uses a proactive approach trying to foresee challenges. If performance is stable, the style works. If performance decreases, the leader reacts. This intervention is not always successful. The workers council aids.

Appendix 13: Content Summary Analysis Transcript R7

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader oversees 45 subordinates.	The leader oversees 45 subordinates.	45
2	A2	The leader R7 describes his/her leadership style as transformational with a particular focus on role modelling. Leading by example has been important for the leader throughout his/her career, mirrored both by employees as well as previous executives. Practicing and implementing role modelling allows to demand from employees what the leader him/herself is prepared to do. This role model function is very relevant.	The leader R7 describes the leadership style as transformational with a particular focus on role modelling. Leading by example has been important for the leader R7 throughout his/her career. Practicing role modelling allows to demand from employees what the leader him/herself is prepared to do.	Transformational leadership style with a focus on role modelling. Leading by example allows to demand from employees what the leader him/herself is prepared to do.
3	A3	Leadership has a high impact on subordinate performance, particularly due to role modelling. Subordinates can be guided by the leader's performance and the leader only asks subordinates to do what he/she is willing to do him/herself. This style of leadership impacts the intrinsic motivation of subordinates. Thus, employees work overtime voluntarily as they believe in the vision of the company. This directly relates back to how subordinates are treated by their respective leader.	Leadership has a high impact on performance particularly due to role modelling. Subordinates are guided by the leader's performance and the leader only asks subordinates to do what he/she is willing to do him/herself. This style positively impacts the intrinsic motivation, leading employees for instance to work overtime voluntarily as they believe in the vision of the company. This relates back to how subordinates are treated by their respective leader.	Leadership impacts performance particularly due to role modelling. This style positively impacts the intrinsic motivation, leading employees e.g., to work overtime voluntarily as they believe in the vision. This relates back to how subordinates are treated by their respective leader.

4	B1	Strong differences were found between employees in how they handled the pandemic. While some were very relaxed, others had extreme fears. It is important that leaders respect both. After lockdown periods, when employees were supposed to come back to the office, accusations came from some that the company was putting families at risk by doing so. Other subordinates never used the option of working from home. In this situation it was very important to try to accommodate the needs of subordinates individually. Yet, decreases in performance were noticed due to the lack of control. This proved particularly difficult for subordinates working in customer service. The leader lost an overview about what employees were doing while working from home. Performance decreased and subordinates almost become unmanageable due to the lack of control. The leader did not see some subordinates for six months face-to-face.	Strong differences were noticed between employees in how they handled the pandemic. While some were very relaxed, others had extreme fears. After lockdown periods, when employees were supposed to come back to the office, some employees made accusations that the company was putting their families at risk by doing so. Other subordinates never used the option of working from home. In this situation it is important to accommodate the needs of subordinates individually. Yet, performance decreased due to a lack of control. Particularly in customer service, the leader lost an overview about what employees were doing. The leader did not see some subordinates for six months face-to-face.	Strong differences were noticed between employees in handling of pandemic. Some very relaxed, others fearful. Accusations were made that the company put families at risk when asking employees to work in the office. Others never used option of working from home. It is important to accommodate the needs individually. Performance decreased due to a lack of control, particularly in customer service.
5	B2	The company provided vaccinations early on in May. This was an important measure as well as working from home. The team does not have to work in the office five days a week. Subordinates have the option of working from home one day a week. This has become possible as employees learned to use digital tools such as Zoom, Skype or Teams during the pandemic. Working from home was however the biggest measure taken.	The company provided vaccinations early on in May. This was an important measure. Moreover, the team can more flexibly decide if they want to work from home one day a week. This is now possible as employees learned to use digital tools such as Zoom, Skype or Teams. Working from home was however the biggest measure taken.	Provision of vaccination early on in May. Usage of digital tools. Working from home, biggest measure. Working hours shifted. Employees can more flexibly decide where and when (e.g., breaks during day, working weekends) they want to work. Short time work implemented for field staff.
6	B2	The working hours have shifted due to the pandemic. In the past, employees were mostly working and reachable from nine to five. If subordinates finished their tasks early, they still had to stay in the office. This has changed. Subordinates are more flexible to decide for example if they go to the gym to work out during usual working hours and therefore work longer hours in the evening. The company uses an all-in contract with all employees, meaning that employees can flexibly decide when they work including the weekend. As the company employs a lot of students this measure is particularly important as students might have lectures during the week and can thus finish their work on Saturdays and Sundays.	The working hours have shifted. In the past, employees were mostly working and reachable from nine to five. Now, subordinates can more flexibly decide if they take breaks during the day and therefore work longer hours in the evening. The company uses an all-in contract, meaning that employees can decide when they work including the weekend. This particularly accommodates the needs of students who have lectures during the week.	
7	B2	The measure of short-time work only applied for the field staff, programmers for instance were not affected. As the sales representatives were not able to keep an appointment with customers to sell the product, they had to work short-time for a few months. From the total of 45 subordinates, this affected two.	The measure of short-time work applied for the field staff, because they were not able to keep an appointment with customers to sell the product. This affected two employees for a few months.	

8	B3	Some employees refused to work in the office, implying that otherwise it would be the company's fault if a family member would die from Covid. Conversations like these are uncomfortable. […] The company provided free Covid tests and FFP2 masks. Moreover, hygiene measures including the disinfection of office space were implemented.	Some employees refused to work in the office, implying that the company would be at fault if the subordinate would catch the virus and consequently infect someone else. Moreover, offering vaccination, free tests and FFP2 masks and ensuring disinfection of the office space.	Some employees refused to work in the office, accusing the company that this might harm family members. It is necessary to listen and allow employees to work from home. Free tests and FFP2 masks are offered. Office space is regularly disinfected.
9	B3	Working remotely from home was the biggest changes.	Working remotely was biggest change.	Working remotely was biggest change.
10	B3	Higher levels of psychological distress are/were noticeable. Fear of infection was particularly in the beginning of the pandemic one of the biggest problems. The leader him/herself had Covid in January. The leader noticed that employees were rather depressed. Many male employees had personal problems in their relationships due to the isolation at home with their spouses and families.	Higher levels of psychological distress were noticed. Fear of infection was particularly in the beginning of the pandemic a big problem. The leader noticed a general depression among employees. Many employees had personal problems in their relationships due to the isolation at home.	Higher levels of psychological distress were noticed. Fear of infection as well as general depression among employees. Many employees had personal problems in their relationships.
11	C1	The leader R7 adapts the leadership style to situational demands. Situational demands as well as individual subordinate differences must be considered. If work operations are running smoothly, the leader R7 may switch to a laissez-faire style and maintain a more friendly relationship with the subordinate. If the work operation is characterised by more stress, the leader R7 must choose a more direct leadership. From past experiences working in the military, the leader R7 knows that a harsher tone must be adopted in special crisis situations. The same applies now if technical difficulties occur concerning the product, but if operations are running smoothly the leadership can be adapted to a more relaxed style. In stressful situations subordinates need a leader to give directions.	The leader R7 adapts the leadership style to situational demands as well as employees individually. If operations run smoothly the leader R7 might switch to a laissez-faire style and maintain a more friendly relationship with the subordinate. In stressful situations, the leader R7 must choose a more direct leadership. This corresponds to past experiences in the military. In stressful situations subordinates need a leader to give directions.	Adaptation leadership style to situational demands and subordinates individually. If operations run smoothly, usage of laissez-faire leadership and friendly relationship with subordinate. In stressful situations, more direct leadership as subordinates need clear directions. During pandemic all subordinates were/are always reachable. Can be traced back to leadership style as well as shifted working hours.
12	C1	The leader R7 had the impression that all subordinates were always reachable, which might be related to the leadership style. If the leader R7 called subordinates late in the evening they would either answer the phone right away or would call back as soon as possible. This can be traced back to the leadership style. All employees seem to be always reachable during the week, which might also be a consequence of the shifted working hours due to the pandemic.	All subordinates were always reachable, which might be related to the leadership style. Subordinates would either always answer the phone (e.g., evenings, weekends) or call back right away. This can be traced back to the leadership style as well as the shifted working hours due to the pandemic.	

13	D1	During the summer 2021 the company had to give notice to some employees as the employment relationship was damaged. Performance decreased mainly due to a lack of control. The leader R7 did not see some employees for six month and could no longer control the efficiency of employees. The working hours were recorded, yet no performance was delivered. Therefore, the leader had to terminate some employees, as the employment relationship did not fit anymore. When employees did return to the office, they were already replaced by other employees who were not as anxious and who were available to the company. This might not have been correct, but it is the truth.	During the summer 2021 the company had to give notice to some employees due to a damaged employment relationship. Performance decreased mainly due to a lack of control. The working hours were recorded, yet no performance was delivered. When some employees did return to the office, they were already replaced by others who were not as anxious and who were available to the company. This might not have been correct, but it is the truth.	During summer, company had to terminate employees due to damaged employment relationship. Performance decreased due to lack of control. Working hours were recorded, yet no performance delivered. When some employees did return to office, they were already replaced by less anxious colleagues who were available. This might not have been correct. Yet, some employees who had refused to come to office due to fear of infection, uploaded pictures on social media showing them in bars and clubs. This did not comply with their fear of infection
14	D1	Adding to the previous statement, some employees communicated that they could not come to the office due to fear of infection. Yet, on social media the leader saw pictures of said employees going to bars and clubs. This did not comply with their fear of infection. Lack of control was a problem.	Some employees communicated that they could not come to the office due to fear of infection. Yet, on social media pictures were uploaded showing these employees going to bars and clubs. This did not comply with their fear of infection.	
15	E1	Attention is soon lost if more than five employees participate in a virtual meeting, depending on the duration of the meeting. Other problems include distracted or inattentive employees often with their video camera turned off. In these instances, facial expressions are missing. Oftentimes during meetings when allocating a task, it is possible for the leader to immediately see the reaction, for instance if the employee is content to do a certain task. This proves difficult during virtual meetings. Technical problems were never a problem since the company employs programmers and other employees with an affinity for technology. The average age in the company is 27 implying that all employees are rather tech-savvy.	Attention is soon lost if more than five employees participate in a virtual meeting, depending on the duration of the meeting. Other problems include distracted or inattentive employees who turned off their video camera. Facial expressions are thus missing. On-site when allocating a task, it is possible for the leader to the see reaction for instance if an employee is content to do a certain task. This proves difficult during virtual meetings. Technical problems are not a problem, since many programmers are employed, and the other employees are rather tech-savvy.	Attention is soon lost in long virtual meetings with more than five participants. Other problems: unattentively, distracted employees who turned off camera, blaming Internet connection when employee did not respond to question. During on-site meetings, leader can see reaction when allocating task (e.g., content, discontent). Facial expressions are missing. No technical problems. Monitoring employees difficult.
16	E1	After a thirty-minute virtual meeting attention is oftentimes lost. This makes it difficult to monitor employees. If a call lasted two hours, many employees are inattentive and when asked something they did not respond right away. This was usually blamed on the internet connection. Yet, the leader thinks the employee was rather inattentive.	After a thirty-minute virtual meeting, attention is oftentimes lost. This makes it difficult to monitor employees. During very long virtual meetings many employees were inattentive and when asked a question did not respond. This was then blamed on the internet connection. Yet, the leader thinks it was rather due to inattentiveness.	
17	E2 + E3	Performance differences were noticed depending on the individual function of employees. For programmers' performance was stable due to clear goals and instructions. Other employees for instance those in customer service working short-time, performance decreased significantly. In this instance it was not necessary to adapt the leadership style other than explaining the	Performance differences were noticed depending on the individual function of employees. The performance of programmers was stable due to clear goals and instructions. The performance of employees in customer service decreased significantly. The leadership style did not need to be adapted other than explaining the measure of short-time work.	Performance differences were noticed. The performance of programmers was stable due to clear goals and instructions. Performance of employees in customer service decreased significantly. An adaptation of the style in this instant was not neces-

		measure of short-time work.		sary, only explaining the measure of short-time work.
18	F1	This psychological burdens of personal problems at home, feeling isolated or confined did negatively impact performance. The leader had several intense conversations with employees who were on the verge of filing for divorce during this time. This certainly decreased performance. An employee might be physically but not mentally present during these difficult times.	This psychological burden of personal problems at home, feeling isolated or confined did negatively impact performance. The leader had several conversations with employees on the verge of filing for divorce. This certainly decreased performance as an employee might be physically but not mentally present during these difficult times.	This psychological burden of personal problems at home, feeling isolated or confined did negatively impact performance. Several employees were on the verge of filing for divorce. This certainly decreased performance.
19	F2	Everyone dealt with the pandemic differently. The leader R7 therefore had to adapt to subordinates individually.	Subordinates deal with the pandemic differently. The leader R7 therefore had to adapt to employees individually.	Subordinates deal with the pandemic differently. Adapting to employees individually is necessary.
20	F2	Considering subordinates needs as well as offering support was extremely important. This was not about performance but giving employees room to manage their personal problems. It would not help to explain the vision of the company repeatedly in such a situation. The leader can only show understanding and offer support as best as he/she can.	Considering subordinate needs as well as offering support was extremely important. This was not about performance but giving employees room to tackle their personal problems. Explaining the vision of the company in such a situation would not help. The leader can only show understanding and offer support as best as he/she can.	Considering subordinate needs and offering support and giving employees room to tackle their personal problems was very important. The leader can only show understanding and offer support.
21	F3	The lenient treatment of employees who were particularly burdened by anxiety or personal problems during this period, has increased performance and loyalty in the long term. This lenient treatment includes considering and meeting needs. Thus, adapting the leadership style e.g., responding more to employee needs has increased performance and efficiency.	The lenient treatment of employees who were particularly burdened by anxiety or personal problems, has increased performance and loyalty in the long term. Thus, adapting the leadership style to consider and respond to the needs of employees has led to a higher performance and efficiency in the long term.	The lenient treatment of particularly burdened employees (e.g., anxiety, personal problems) has increased performance and loyalty in the long term. Adapting the leadership style to respond to the needs has led to a higher performance and efficiency.

Appendix 14: Content Summary Analysis Transcript R8

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R8 approximately oversees 50 employees.	The leader R8 approximately oversees 50 employees.	50
2	A2	The leader R8 manages employees that are in leading positions as well, approximately seven. These employees themselves are very experienced. Therefore, it is difficult to determine the leadership style leader R8 uses. Yet, empowerment is a crucial part of it. The leader does not use a directive or authoritative leadership style but rather sees himself as a captain of the team. It is important to utilize the ideas, experience and creativity of employees, particularly as the company is an a highly competitive and dynamic market. Therefore, empowering and delegating as well as having an overview is important	The leader R8 manages employees that are leaders themselves. It is difficult to determine a leadership style, yet empowerment is a crucial part of it. Utilizing the ideas, experience and creativity of employees is important. Empowering, delegating tasks and having an overview are central aspects of the leader's leadership style.	Empowerment is a crucial aspect. Utilizing the ideas, experience and creativity of employees is important. Empowering, delegating tasks and having an overview are central aspects.

3	A3	Leadership impacts performance to a good extent. The motivation of employees is high, yet a lot of work is occasionally accompanied by frustration. It is therefore important to empower employees and actively listen to their needs, particularly in the current crisis climate. Strong supportive leadership, active listening as well as helping employees to prioritize are crucial elements that help increase performance.	Leadership impacts performance to a good extent. The motivation of employees is high, yet a lot of work is occasionally accompanied by frustration. Thus, it is important to empower and actively listen to employees' needs. Strong supportive leadership, active listening and helping prioritize tasks are crucial elements to help increase performance.	Motivation is high, yet occasionally frustration occurs. Thus, empowering and actively listening to employee needs is crucial. Strong supportive leadership, active listening and helping prioritize tasks help increase performance.
4	B1	The last year has been the most successful year of the company, yet not because of the crisis. The good culture in the company helped achieve this success. The company is currently growing and hiring even remotely. Thus, regarding performance a lot is possible.	The last year has been the most successful year of the company. The good culture helped achieve this success. The company is currently growing and hiring, even remotely.	Most successful year 2020. Strong authentic leadership can help overcome crises. Experienced leaders with instinct for effective behaviours, who actively lead and are self-aware can guide teams through crises. During crisis, differences between good and bad leaders become even more apparent.
5	B1	Strong authentic leadership can help in overcoming crisis situations. Particularly experienced leaders who developed an instinct for effective leadership behaviours in various situations, can guide teams through crisis situations. Actively leading, being self-aware meaning knowing strength and weaknesses helps overcome crisis. The leader R8 emphasizes that in a crisis, differences between good and bad leaders become even more apparent.	Strong authentic leadership can help overcome crisis situations. Experienced leaders with an instinct for effective leadership behaviours, who actively lead and are being self-aware can help guide teams through crisis situations. In a crisis, differences between good and bad leaders become even more apparent.	
6	B2	Regular one-on-one meetings with video cameras turned on are very important. In meetings with a lot of participants, it is allowed to switch off the camera. Active and systematic planning and scheduling of meetings is crucial. Chat functions are used creatively. Meetings start with questions concerning the well-being of employees and actively listening to their problems. In addition to the pandemic, the U.S. had to face other crisis last year: Black Lives Matter demonstrations in response to the assassination of George Floyd, drought, wildfires as well as a political crisis. These uncertain times frighten people, which is why it is important to respond to employees individually and build trust. The same applies for employees with whom a relationship of trust already exists. It is important to firstly connect with employees before diving into the subject matter. This is a change from the pre-crisis situation.	Regular one-on-one meetings with video cameras turned on are very important. Only in meetings with many participants, employees are allowed to turn off the camera. Chat functions are used creatively. Meetings start with questions concerning the well-being. In addition to the pandemic, the U.S. faced other crisis last year: Black Lives Matter demonstrations in response to the assassination of George Floyd, a drought, wildfires and a political crisis. People are frightened, making it important to respond to employees individually and build trust. First connecting with employees before diving into the subject matter. This is a change.	Regular one-on-one meetings with video camera. Chat functions are used creatively. Meetings start with questions concerning well-being. Last year in the U.S. more crises than pandemic: Black Lives Matter, wildfire, drought, political crisis. People are frightened, thus important to respond to employees individually. Building trust. Connecting with employees before diving into subject matter. This is a change.
7	B3	[…] Performance did not decrease. In the future, a hybrid model will prevail with 3-4 office days and 1-2 days working from home. A hybrid model would combine the best effects from prior to the crisis with the positive effects during the crisis. Of course, for some employees working in manufacturing for instance, working from home is not an option.	[…] Performance did not decrease. In the future, a hybrid model will prevail with 3-4 office days and 1-2 days working from home. Of course, for employees working for instance in manufacturing, this is not an option.	[…] Performance did not decrease. In the future, hybrid model will prevail. No short-time work. Employees can reduce their working hours, if they need. Some (strategic) meetings will again take place on-site. Important to ask and listen to employees regarding e.g., space constraints at home.
8	B3	Short-time work is not a measure in the company. However, if employees need to reduce their work hours for instance to	No short-time work. The company allows if employees can currently only work 70%. There will likely be 20-	

		70%, the company allows that. The leader R8 assumes that there will be 20 to 30% less business travel in the future. Many meetings can be held virtually, however particularly strategic related meetings will again take place in person. Regarding space constraints at home, it is again important to actively listen to employees and ask about the well-being. In general, salaries are high in the company and industry, thus employees are comparably rather privileged. The company is moreover soon mandating vaccination. Wearing masks in the office is mandated as well. Most employees are however still working from home. The leader describes his role as a double, triple role.	30% less business travel. Some meetings, particularly strategic ones, will again take place in person. Regarding space constraints at home, it important to actively ask and listen to employees about their well-being. However, salaries are high in the company and industry, thus employees are comparably rather privileged. The company is soon mandating vaccination. Most employees still work from home. The leader describes his role as a double, triple role.	Salary is high. Company is soon mandating vaccination. Most employees still work from home.
9	B3	The team is currently still working almost completely remotely.	Still almost working completely remotely.	Still almost 100% remote work.
10	B3	The leader R8 himself noticed negative effects of the Covid pandemic on the mental state. This relates to the number of meetings and the ignorance of Covid denier and conspiracy theorists. Knowing that the leader himself struggles with a lack of energy due to frustration, he tries to identify early warning signs by asking questions regarding the personal situation, family life, workload etc. Moreover, encouraging employees to take vacations including a synchronized break of two weeks that the company enforces.	The leader himself noticed negative effects on the mental state. This relates to the number of meetings and the ignorance of Covid-19 denier and conspiracy theorists. Knowing own struggles with occasional frustration and exhaustion, the leader tries to identify early warning signs by asking questions regarding personal situation, workload etc. Moreover, encouraging employees to take vacation, including synchronized break enforced by the company	Negative effects on mental state due to number of meetings, ignorance of Covid-19 denier and conspiracy theorists. Trying to identify early warning signs by asking personal questions. Encouraging employees to take vacations.
11	C1	Leadership styles need to be adapted to situational demands. The leader is mentoring as well as coaching some employees. The leader R8 likes situational leadership, meaning adapting the leadership style to the degree of time pressure. During a crisis such as the current pandemic moments of crisis management occur. In such instances a democratic approach is rare. In other situations, there might be more time and a different approach can be more beneficial. Yet, the leader R8 emphasizes that it is important to always focus on the vision and long-term goals, instead of just reacting. This refers to the visionary part of the leader's leadership style.	Leadership styles need to be adapted to situational demands. The leader R8 likes situational leadership, meaning adapting the leadership style to the degree of time pressure. In a crisis, democratic approaches would be too time-consuming. In other situations, with more time, other approaches might be more beneficial. Yet, it is always important to focus on the vision and long-term goals. This refers to the visionary aspect of the leadership style.	Style needs to be adapted to situations. Situational leadership means adapting style to degree of time pressure. In crisis, no time for democratic approach. Yet, always important to focus on vision and long-term goals. This is the visionary aspect. Currently: active listening, demonstrating sincere interest, understanding individual situation. Interpersonal component stronger. Increased reflection and self-awareness as part of situational leadership. Situational does not mean reacting aimlessly.
12	C1	Active listening, demonstrating sincere interest in employees and understanding the individual situations is crucial. This interpersonal component is stronger than ever. The current situation has led to increased reflection. Self-awareness, knowing your strength and weaknesses and working on yourself is part of situational leadership. The leader R8 emphasizes that situational leadership does not mean reacting aimlessly. Yet, being self-aware makes leaders stronger which ultimately allows to empower teams.	Active listening, demonstrating sincere interest and understanding the individual situation is crucial. This interpersonal component is stronger than ever. Increased reflection and self-awareness are part of situational leadership. The leader R8 emphasizes that situational leadership does not mean reacting aimlessly. Being self-aware makes leaders stronger which ultimately empowers teams.	
13	D1	Employees are working longer hours, because commute time is eliminated.	Employees are working longer hours, because commute time is eliminated.	Employees are working longer hours, because

				commute time is eliminated.
14	D2	Challenges referring to the working conditions e.g., closure of schools, are a reason why it is very important to actively listen to employees individually to understand the family situation. The leader himself was impacted by the closure of childcare facilities. Thus, it is important to learn about and understand the individual conditions. Understanding and acknowledging needs and offering support through flexible time off.	Challenges referring to the e.g., closure of schools, are a reason why it is important to actively listen to employees individually to understand the family situation. Thus, it is important to learn about individual conditions. Acknowledging needs and offering support through flexible time off.	Closure of schools are an example why it is important to actively listen and know individual family situation. Acknowledging needs and offering support through flexible time off. Showing compassion and vulnerability. Letting employees know they are not alone in this situation. In U.S. this refers to diversity and inclusion debate as well. Actively addressing racial and economic injustices that increase due to the pandemic.
15	D2	Active listening is an essential part of success during crises. Leaders should persistently ask questions to get information from employees who may be reluctant to talk openly. Showing compassion and vulnerability by opening about own troubles is crucial. This way employees know and feel that they are not alone in this situation. This form of openness and vulnerability might be stronger currently in the U.S. as one can see regarding the inclusion and diversity discussion. Actively addressing racial and economic injustices, which only increase during the pandemic. Leaders should show support and demonstrate their own vulnerability.	Active listening, showing compassion and vulnerability is important. Letting employees know that they are not alone in this situation and that it is okay to talk openly about struggles. In the U.S this demonstration of vulnerability might be stronger, as diversity and inclusion debates are very present. The company and the leader are actively addressing racial and economic injustices, which only increase in the pandemic.	
16	D3	The leader R8 always focuses on opportunities that arise from situations. Employees notice when leaders not only listen to problems but try to turn them into opportunities. This is an essential part of success. The leader did not notice any performance decreases, yet also no performance improvements. Adjusting to the situation, a high level of performance can be maintained.	The leader R8 focuses on opportunities that arise from situations. Employees notice when leaders not only listen to problems but try to turn them into opportunities. This is an essential part of success. Performance did neither decrease nor improve. By adjusting to the situation, a high level of performance was maintained.	Focusing on opportunities that arise from situations. Employees notice if leaders not only listen to problems but turn them into opportunities. Performance did neither decrease nor improve. A high level of performance was maintained through adjustments.
17	E1	It is difficult to have strategic discussions in a virtual environment. A lot of the disadvantages of a virtual environment are compensated by longer working hours. When working in the office issues can be resolved much faster due to simplified communication. In a virtual environment it needs more time to organize and schedule a meeting. Connectivity between leader and employees is decreased. A virtual environment cannot replace working in the office. However, working longer hours compensates for the disadvantages of virtuality.	It is difficult to have strategic discussions in a virtual environment. Disadvantages of the virtual environment are compensated by longer working hours. Issues can be easier resolved in the office due to simplified communication. It needs more time to schedule and organize virtual meetings. Connectivity between leader and employees is decreased. A virtual environment cannot replace working in the office.	Strategic discussion difficult in virtual environment. Disadvantages of virtuality compensated by longer working hours. Simplified communication in office. More time needed to schedule and organize virtual meetings. Connectivity decreased. Virtual environment cannot replace working in office (small talk, coming together, better overview). Once hybrid model is installed, selected days when all employees come to office. Benefits of working in office increased performance. Working remotely increases costs (longer working hours) to maintain performance. Situation in office will only relax once
18	E1	The advantages of colocation are reportedly missing. This includes small talk, coming together, solving problems. In the office the leader has an overview simply by greeting the employees. Seeing each other face-to-face is essential. Thus, once the hybrid model is installed, the leader will ensure that on selected days each week, everyone comes to the office. The advantages of working in the office in-	Advantages of colocation are reportedly missing. This includes small talk, coming together, solving problems. The leader can achieve an overview by simply greeting employees in the office. Thus, once the hybrid model is installed, the leader R8 will ensure that on selected days each week, everyone comes to the office. Benefits of working in the office positively	

		crease productivity. While working virtually the individual cost of maintaining performance is higher than prior to the crisis. Working longer hours compensates the disadvantages. In the office employees probably work lesser hours and achieve the same productivity. The situation will only relax in the office once the mask mandate is abolished.	impact performance. Working remotely increases the cost (e.g., longer working hours) to maintain performance. In the office, employees probably work lesser hours and achieve same productivity. The situation in the office will however only relax once mask mandate is abolished.	mask mandate is abolished.
19	E2	The leader has a rather powerful, compelling presence, which might intimidate new employees as the trust relationship has not yet been established. The leader R8 thinks the virtual environment comes with an opportunity to keep a low profile and taking more of a moderating, listening position. The leader R8 thus, keeps a close eye on who is participating in the meeting and then asks quieter employees to share their opinions.	The powerful, compelling presence of the leader might intimidate new employees. The leader R8 thinks the virtual environment comes with an opportunity to take more of a moderating, listening position. Thus, the leader keeps a close eye on who is participating in the meeting and then asks quieter employees to share their opinions.	Virtual environment comes with opportunity to take more of a moderating, listening position. Keeping an eye on who is participating in meeting and asking quieter employees to share their opinions. Combining advantages of colocation and virtual environment. By listening to employees, leader can offer individualized solutions. Working two-three days in office, will be mandatory.
20	E2	Working in the office has advantages. Yet, the advantages of the virtual environment should also be used after the pandemic. Employees could spend a lot of time at home with their families. Yet, others prefer a clear separation between personal and professional life. By listening to employees, the leader can offer individualized solutions. Some might prefer working five days a week in the office, other might only come the mandated two or three days.	Working in the office has advantages. Yet, the advantages of virtuality should also be used after the pandemic. Employees could spend a lot of time with their families. Yet, others might prefer a clear separation of private and personal life. By listening to employees, the leader can offer individualized solutions. Two or three days a week working in the office will be mandatory.	
21	E3	Active listening, granting flexibility and placing an emphasis on health, is crucial. Studies show that meetings that last longer than 90 minutes are inefficient. The leader thus ensures breaks during meetings to stretch, eat etc. If children, pets or spouses can be seen in the background, it is not a problem. The company and the leader R8 even encourage employees to share pictures on the intranet to show creativity in dealing with the current situation.	Active listening, granting flexibility and placing emphasis on health, is crucial. Studies show that meetings longer than 90 minutes are inefficient. The leader ensures breaks. The company and leader R8 encourage employees to share pictures to show creativity in dealing with the current situation.	Active listening, granting flexibility and placing emphasis on health. Meetings longer than 90 minutes are inefficient. Ensuring breaks. Encouraging employees to share pictures to show creativity in dealing with the situation.
22	F1	Employees likely burn out, if they are unhealthy regarding their multiple roles. Being not healthy eventually harms oneself, the family and the company. Due to high motivation levels employees rather work too much, making it important to encourage employees to take breaks and focus on mental health.	Being unhealthy regarding one's multiple roles, likely leads to burnouts. Being not health harms oneself, the family and the company. Due to high motivation employees rather work too much, making it important to encourage employees to take breaks.	Being unhealthy regarding multiple roles, likely leads to burnouts. It harms oneself, family and company. Motivation is high, employees work rather too much. Encouraging to take breaks.
23	F2	Open conversation about feelings, fears and anxiety to demonstrate that everyone is in the same situation.	Open conversation about feelings, fears and anxiety.	Conversations about feelings, fears and anxiety. Programs to ensure health e.g., yoga classes. Leader act as role model to show importance of taking care of oneself. Only healthy can one help another.
24	F2	The company has programs to ensure the health of employees for instance yoga classes. Moreover, leaders act as role models, showing the importance of taking care of yourself and your health. If someone is unhealthy, he/she is unable to help others.	Programs to ensure the health of employee for instance yoga. Leaders act as role models, showing the importance of taking care of yourself and your health. If someone is unhealthy, he/she cannot help others.	

25	F2+F3	Employees have a high level of motivation and are rather working too much. Paired with ambitious goals, this poses a risk of burnout. Thus, awareness is important particularly in the virtual environment. The leader leads other executives himself but knows all employees who are supervised by these executives. The leader R8 actively seeks conversations without specific context with the employees, to ask about their well-being. The leader R8 is not aware of serious cases of mental distress. The leader thinks that if employees only receive orders, the likelihood of burnouts increases. Yet, this is rare in the company as most employees are highly motivated and encouraged to come up with solutions. Empowering and conveying confidence in employees increases self-esteem, which might reduce the likelihood of burnouts.	Highly motivated employees who rather work too much. Paired with ambitious goals, this poses a risk of burnout. Thus, awareness is particularly important. The leader is in contact with roughly 50 employees oftentimes just asking about their well-being without a specific context. If employees simply receive orders, the likelihood of burnouts might increase. Yet, this is rare in the company as most employees are highly motivated and encouraged to come up with solutions. Empowering and conveying confidence increases self-esteem. No serious cases of mental distress.	Employees work too much due to high motivation and ambitious goals. Poses a risk for burnouts. Awareness is crucial. Employees are highly motivated and encouraged to come up with solutions. Empowering and conveying confidence increases self-esteem. No serious cases of mental distress.

Appendix 15: Content Summary Analysis Transcript R9

Nr.	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R9 oversees 35,36 subordinates.	The leader R9 oversees 35,36 subordinates.	35,36
2	A2	The leadership style depends on the situation as well as the individual subordinate. For some subordinates a rather relaxed leadership style is efficient, as they work conscientiously and perform well. For other subordinates a more monitoring is needed to ensure performance. Thus, for these employees the leader must actively control their actions.	The leadership style depends on the situation as well as the individual subordinate. For employees who work conscientiously and perform well, a relaxed leadership style is appropriate. For other subordinates more monitoring and active control is necessary.	Depending on the situation and subordinate. For some a relaxed style is sufficient. For other employees' active control and monitoring is necessary.
3	A3	The leader R9 clearly communicates that respect is the foundation of working together. Even though you might not form a community in your personal life, it is important to form a c community in your everyday work life. A guideline of the company that the leader installs is that when you work together, the work is not only easier, but you also achieve more. Even though you can do a lot of work alone, such as changing a tire, it is much easier and faster to do it together. In principle, these guidelines are internalized, although there are exceptions. When teamwork works well, fluctuating order loads can be better managed. On some days there are a lot of orders, on others there are fewer. Employees must internalize these fluctuations. However, the leader R9 explains that the employees are very loyal to the company and do their best to achieve the best work results together.	The leader R9 clearly communicates that respect is the foundation of working together. An important guideline the leader installs is that when you work together, the work is not only easier, but you also achieve more. In principle, these guidelines are internalized, although there are exceptions. When teamwork works well, fluctuating order loads can be better managed. The employees are in general very loyal to the company and do their best to achieve the best work results together.	Respect is the foundation of working together. When you work together, work is not only easier, but you also achieve more. When teamwork works well, fluctuating order loads can be better managed. The employees are in general very loyal to the company and do their best to work together.
4	B1	The financial crisis of 2008 did not impact the company. In the contrary the order situation was even particularly good in the following years. The current crisis did not	The financial crisis of 2008 did not impact the company. The current crisis did and does not impact the company as well. Employees behaved very	Financial crisis of 2008 and current crisis did and does not impact company. Employees are very relia-

		impact the company. The employees behaved very reliably, so the leader R9 had to exercise less control and monitoring of tasks. The employees generally all work separately in trucks for example, so keeping their distance was not a problem. Since the office rooms are large enough, it is also possible to the physically separated there. One measure taken to reduce contacts was, for example, not to have delivery bills signed. Otherwise, the company did not have to make any major changes as a result of the crisis.	reliably, so the leader R9 had to exercise less control and monitoring of tasks. The employees generally all work separately, so keeping their distance was not a problem. The office rooms are large enough, thus it is possible to physically separate there. One measure taken to reduce contacts was, not to have delivery bills signed.	ble, leader had to exercise less control. Employees generally work separately, so keeping distance was not a problem. Office rooms are large enough as well. One measure was not having delivery bills signed. One challenge is attitude and basic mood. Everyone faces fears or sees private life in jeopardy. Leader takes on role as therapist, conversation partner. Crisis has a debilitating effect.
5	B1	One challenge is the attitude and basic mood during the crisis. Everyone faces different fears or sees their private life in jeopardy. The leader R9 takes on more of a therapist or conversation partner role. Corona critics confront the leader with supposed information from social media. The crisis has a debilitating effect, specifically in relation to the community.	One challenge is the attitude and basic mood during the crisis. Everyone faces different fears or sees their private life in jeopardy. The leader R9 takes on more of a therapist or conversation partner role. The crisis has a debilitating effect.	
6	B2	The company installed protection measures such as the provision of disinfectant and mandatory masks during social contact situations. Customer contact is avoided when possible. The break room was moved to a hall. These are only minor measures to ensure social distancing. In the office air filters were installed. The leader R9 sits in an 80 square meter office with one colleague and five windows.	Protection measures include provision of disinfectant and mandatory masks during social contact situations. Customer contact is avoided when possible. The break room was moved to a hall to ensure social distancing. In the office air filters were installed.	Protection measures include provision of disinfectant and mandatory masks. Customer contact is avoided. The break room was moved to a hall. Air filters were installed in the office. No visits were made to customers during the Christmas season.
7	B2	One measure was to refrain from visiting customers to bring gifts during the Christmas season. The whole industry did without it last year. This is also since other companies in this industry have worked primarily from home. Since the industry is a small community, it worked well even though it was not possible to see each other one year.	One measure was to refrain from visiting customers during the Christmas season. The whole industry did without it last year. Other companies in the industries have worked primarily from home.	
8	B3	Two employees were affected by the closure of kindergartens. Work has been left undone, but understanding is great, particularly because the upper management colleagues have children in a similar age. The employees found a solution for the situation within a couple of days. Spatial separation concerns the office rooms, as employees now sit in different offices to maintain distance. […]	Two employees were affected by the closure of kindergartens. Work has been left undone, but understanding was great. The employees found a solution within a couple of days. Spatial separation takes place in the office. Employees now sit in different offices to maintain distance. One colleague worked from home for a couple of days.	Two employees were affected by closure of kindergartens. Understanding was great. Solution was soon found. Spatial separation takes place in the office. One colleague worked from home for a couple of days. This did not work properly due to a lack of information.
9	B3	The company mainly uses telephones as a communication tool. Preliminary inquiries are sent by mail.	No virtual environment.	No virtual environment.
10	B3	Concerns and fears have increased considerably. This relates for instance to existential questions of employees who recently build their house. It was worse in the first year than in the second. Moreover, the recreational effect of vacation decreased. Everything relates to re-	Concerns and fears increased considerably. This relates to existential financial questions, family situations or leisure life. It was worse in 2020. The recreational effect of vacation decreased due to the many restrictions (e.g., going to a restaurant, a public	Concerns and fears increased considerably. This relates to financial aspects, family situations or leisure life. It was worse in 2020. The recreational effect of vacation de-

		strictions for instance going into a restaurant or going to a public pool. Thus, the recovery effect of vacations, which in the past worked very well did not take place. All worries, whether related to the family situation, leisure life or financial situation, impact the well-being and the basic mood. A good basic mood within the company is essential to deliver good work. Yet, currently the basic mood is more irritable.	pool). Thus, the recovery effect of vacations, which in the past worked very well, did not take place. All the worries, fears and concerns impact the well-being and basic mood. A good basic mood is essential to deliver good work. Yet, currently the basic mood is more irritable.	creased due to restrictions. Worries, fears, concerns impact well-being and basic mood. The basic mood in the company has become more irritable.
11	C1	The leadership style needs to be adapted to situational demands referring to both the work as well as the personal situations. The company cannot influence certain situations for instance in the private lives, thus the leadership occasionally needs to adapt.	The leadership style needs to be adapted to work and personal situational demands. The company or the leader cannot influence certain situations, thus the leadership occasionally needs to be adapted.	The leadership style needs to be adapted to work and personal situational demands.
12	D1	Usually, sitting together in one office had the advantage that information was shared immediately.	Sitting together in an office had the advantage that information was shared immediately.	Sitting together in an office had advantage that information was shared immediately.
13	D1	Due to spatial distancing in the office sharing information has become a challenge. One colleague worked from home due to a Covid case in the apartment building. For the employee, it has proven to be very difficult to work from home, as he has been missing important information. The personal exchange with the office and the customer contact did not work because essential information was missing. This situation has shown that working from home does not work in the company. In order to respond well, employees need to be on site.	Usually, sitting together in an office had the advantage that information was shared immediately. This has now become a challenge. One colleague worked from home for a couple of days. This has proven difficult, as he has been missing important information. The personal exchange with the office and the customer contact did not work properly. This situation has shown that working from home does not work for the company.	Sharing information spatially distant in office is more difficult. Working from home does not work due to a lack of information transfer.
14	F1	The crisis has shown that the employees in a company are an average of society. Some employees got vaccinated as soon as possible, others have not made up their minds yet and then there are employees who think the Covid-19 pandemic does not really exist. These differences of opinions and attitudes towards the pandemic cause problems as it is difficult to have a joint order processed by employees with very opposite beliefs. Tasks must be assigned differently. Some employees are impacted by their fears and anxieties.	Employees in a company are an average of society. Some employees got vaccinated as soon as possible, others have not made up their minds yet and then there are employees who think the Covid-19 crisis does not exist. These differences of opinions and attitudes cause problems as it is difficult to have a joint order processed by employees with opposite beliefs. Tasks must be assigned differently. Fears and anxiety impact employees.	Differences of opinions and attitudes towards the pandemic caused problems as it is difficult to have joint orders processed by employees with opposite beliefs. Tasks must be assigned differently. Fears and anxiety impact employees.
15	F1	Worries and concerns decrease the focus on work. In the beginning of the week, the leader R9 gives a rough direction and readjusts instructions the following days. Yet, the leader R9 noticed that occasionally employees forget or do not listen to conversations as the employee's mind is elsewhere.	Worries and concerns decrease the focus on work. The leader R9 notices that instructions were not implemented and that conversations were either forgotten or the employee did not listen properly. This is since employees are elsewhere with their thoughts.	Worries decrease the focus on work. Instructions are not implemented, and conversations were either forgotten or the employee did not listen properly. Employees are elsewhere with their thoughts.
16	F2	The leader does monitor assignments more often to ensure that the tasks is fulfilled. The leader R9 listens more intensively to employees that face worries of infection, family or existential problems. This can be additionally attributed to the lack of moral support caused by social distancing (e.g., soccer or bowling club).	The leader does monitor assignments more closely to ensure that tasks are fulfilled. The leader R9 listens to employees who have a fear of infection, family or existential problems. This can be additionally attributed to the lack of moral support caused by social distancing. When offering an opinion,	Monitoring assignments to ensure fulfilment of tasks. Listening to employees fear of infection family or existential problems. When offering opinions, in a gentle way, more pressure would be counterpro-

		Thus, the leader tries to actively listen even though oftentimes he cannot help. When offering an opinion, the leader does it in a gentle way as robustness decreased. Creating more pressure would be counterproductive. The leader listens and asks if situations e.g., family problems could be solved. This does help sometimes. With some employees, it is very difficult to shift the focus to positive aspects for instance that we are not in a famine or war situation and that hopefully a cure against Corona will soon be developed.	the leader does it in a gentle way as robustness decreased and creating more pressure would be counterproductive. The leader listens and actively asks if problems could be solved. This does help sometimes. With some employees, it is difficult to shift the focus to positive aspects.	ductive. Listening and actively asking if problems could be solved. This helps sometimes. Tone has become rougher due to differing views. Leader R9 acts as mediator, friend, interlocuter. Employees who used to get along well have now distanced themselves due to differing views. Leader tries to restore normal working relationship. This is part of conveying respect as an important value.
17	F2	The tone among employees with very opposite opinions has become rougher. The leader R9 must act as a mediator, colleague, friend and interlocutor. Employees who used to get along well have now distanced themselves due to differing views. The leader R9 must ensure that the differences between employees do not increase and that a normal working relationship is restored. This is part of conveying respect as an important value. This falls under the category of leadership, as the leader is trying to defuse the situation.	The tone among employees with differing views has become rougher. The leader R9 acts as a mediator, colleague, friend and interlocuter. Employees who used to get along well have now distanced themselves due to differing views. Leader R9 must ensure that differences do not increase and that a normal working relationship is restored. This is part of conveying respect as an important value.	
18	F3	The employees always manage to perform the work even if some days require working at 100, 110 percent instead of the basic workload of 80, 85 percent. The employees are very committed to the company. If a project requires working overtime, the employees do not ask if they must work longer but simply do. After completing such a big project, the situation usually the workload is reduced. It is difficult to measure performance yet being on site allows the leader to see the mood of employees by seeing their facial expressions. The leader R9 than notices that some employees can handle the current situation well and others might have more stress dealing with it.	The employees always manage to perform, even if some days are particularly labour-intensive. The employees are very committed to the company and voluntarily work overtime when necessary. It is difficult to measure performance. Being on site allows the leader R9 to see the mood of employees by seeing their facial expressions.	Employees always manage to perform even if some days are very labour-intensive. Employees are very committed and voluntarily work overtime if necessary. Seeing facial expressions is crucial to know the mood of employees.

Appendix 16: Content Summary Analysis Transcript R10

Nr	Cat	Paraphrase	Generalization	Reduction 1+2
1	A1	The leader R10 oversees approximately forty subordinates.	The leader R10 oversees approximately forty subordinates.	Approximately 40
2	A2	It is a mixture of the different leadership styles. The basis of the leadership style is a team orientation. In certain situations, direct instructions must be given. The leader encourages and coaches those employees who show a corresponding interest. For certain employees, on the other hand, clear instructions must be given that do not allow for discussion.	It is a mixture of different leadership styles. The basis is a team orientation. In certain situations, or for certain employees, direct instructions must be given that do not allow for discussion. The leader R10 coaches those employees who show a corresponding interest.	Mixture of different styles. Basis is team orientation. Certain situations and employees demand for direct instructions, no discussion. Coaching employees who show interest.
3	A3	The former management in the company did not allow employees to contribute their own ideas or make their own decisions. Manager R10 has 20 years of very differ-	The former management did not allow employees to contribute their own ideas or make their own decisions. Committed employees now see the	Committed employees now see opportunity to contribute creatively. This has a direct, strong posi-

		ent experience in another company. Committed employees now see the opportunity to contribute creatively. This has a direct, strong positive impact on performance. Employees improve their performance in this case for both the company and the leader. It is a reciprocal give and take relationship. If an employee asks to come in later one day, the manager is happy to give the okay, as such favours are reciprocal. One employee will soon be trained as a trainer, which is why performance has improved significantly due to the increased motivation. However, it also depends on the individual person.	opportunity to contribute creatively. This has a direct, strong positive impact on performance. Employees improve their performance for both the company and the leader. It is a reciprocal give and take relationship.	tive impact on performance. Employees improve their performance for both the company and the leader. It is a reciprocal give and take relationship.
4	B1	During the financial crisis, the leader R10, at that time still in another company, perceived a loss of trust in the leadership by the employees. Employees thought that the leadership was doing the wrong thing but would not be affected by the consequences. Measures in the interest of the employees were also viewed critically. The Covid 19 crisis, on the other hand, had neither a negative nor a positive impact on employee performance.	The financial crisis led to a loss of trust in the leadership by employees. Even measures in the interest of employees were viewed critically. The Covid-19 crisis had neither a negative nor a positive impact on employee performance.	Financial crisis led to a loss of trust in the leadership. The Covid-19 crisis had neither a negative nor a positive impact on performance.
5	B2	The interaction between employees has changed as a result of the current crisis. Opinions and attitudes regarding the pandemic are sometimes extremely divergent. Extreme cases are vaccination opponents and corona deniers. In some cases, there is a tendency towards bullying among staff. Employees have come to the manager who wanted to take a day off for the vaccination and expressly asked the manager not to tell other employees. Even though it's only a small part of the team, it has changed the atmosphere.	The interaction between employees has changed. Opinions and attitudes regarding the pandemic are sometimes extremely divergent. Extreme cases are vaccination opponents and corona deniers. In some cases, there is a tendency towards bullying among staff. Some employees do not want others to find out they are vaccinated.	Interaction between employees changed due to divergent opinions and attitudes regarding pandemic (extreme cases: corona deniers, vaccination opponents). In some cases, tendency towards bullying because of it. Continuous and detailed provision of information. Measures: tests, disinfection and masks. Compliance and with and implementation of mandatory masks had to be monitored and communicated.
6	B2	One measure is the continuous and detailed provision of information. Wearing masks is another measure. Compliance with and implementation of this measure must be constantly monitored and communicated. In addition, voluntary tests were offered, but everyone does them. The essential measures are therefore tests, disinfection and masks.	One measure is the continuous and detailed provision of information. Compliance with and implementation of the mandatory masks must be constantly monitored and communicated. The essential measures are tests, disinfection and masks.	
7	B3	[…] Wearing masks is therefore stressful for employees. It has been clearly defined that employees only need to wear masks when they are not alone at the machine. There are two rooms in the offices where the employees and the leader can spatially distance themselves. Childcare and home schooling was only a problem in isolated cases, as the average age is quite high.	Wearing masks is therefore stressful for employees. It has been clearly defined that employees only need to wear the masks when they are not alone at the machine. In the office, the leader and employees can spatially distance themselves. Childcare was only a problem in isolated cases.	Very stressful to wear masks on production floor for employees. Clearly defined that employees only have to wear masks when they are not alone at the machine. In office, leader and employees can spatially distance themselves. Childcare only problem in isolated cases.
8	B3	A virtual working environment does not exist in production. The manager has more video calls with different companies because of the change of management and the pandemic.	No virtual environment in production.	No virtual environment.

9	B3	The leader did not notice any increased stress levels or psychological burden, except for employees who had to take care of children and home schooling simultaneously. There, the leader tried to reduce the employees' stress. However, this only affected two out of forty employees.	The leader did not notice any increased psychological distress, except for employees who had to take care of children. There, the leader tried to reduce the employees' stress.	No psychological distress noticed, except for employees with children. There, leader tried to reduce the employees' stress.
10	C1	The leader adapts the leadership style according to the situation and the employee individually. Some employees want to work in a team, while others tend to refuse. For the latter, direct instructions are needed. Situationally, it depends on how high the production pressure is. If there is a lot of time pressure, discussions are not possible, something must be implemented directly. The employees have a feeling for when it is possible to discuss and joke with the leader R10 and when quick implementation is necessary.	The leader R10 adapts the leadership style to the situation the employees individually. Some employees want to work in a team, while others tend to refuse. For the latter, direct instructions are needed. Situational, it depends on the production and time pressure. High time pressure does not allow discussions. The employees have a feeling for when it is possible to discuss and joke with the leader.	Adaptation to situation and employees. Those employees who refuse to work in a team, need clear direct instructions. Situational, it depends on the production and time pressure. High time pressure, no discussion possible.
11	D1	The biggest challenge is wearing masks on the production floor, where the minimum temperature is 36 degrees, even higher in summer. Wearing masks is therefore stressful for employees.	Wearing masks on production floor with minimum of 36 degrees temperature, very stressful for employees.	Wearing masks is a physical challenge for employees on production floor (>36 degrees).
12	D3	Employees who had to take care of childcare and home schooling were given a lot of flexibility. Employees could create time off or swap shifts. This is again due to the reciprocal relationship.	A lot of flexibility was granted to employees who had to take care of their children. Employees could create time off or swap shifts. This is again due to the reciprocal relationship.	A lot of flexibility was granted. Employees could create time off or swap shifts. Reciprocal relationship.
13	D4	Employees whose needs were met, for example through flexibility, were grateful. These are often the same employees who also want to be coached. The leader did not notice a big effect on performance, but it was constantly good.	Employees whose needs were met, for example through flexibility, were grateful. The leader did not notice a big effect on performance, but it was constantly good.	Employees whose needs were met were grateful. Stable, good performance.
14	F3	The leadership style was not adapted in this regard. The leader bases leadership on a reciprocal relationship, at least with employees who engage in it. Employees are working capital, so the leader tries to maintain satisfaction. If it fits into the operational process, concessions are gladly made. If this is not possible, the employees understand that. The leader has not really changed his leadership behaviour, he just no longer discusses with Covid opponents.	The leadership style was not adapted. The leader bases leadership on a reciprocal relationship, at least with employees who engage in it. Employees are working capital, so the leader tries to maintain satisfaction. If it fits into the operational process, concessions are gladly made.	No adaptation. Leadership based on reciprocal relationship, at least with employees who engage in it. Leader tries to maintain satisfaction. If possible, concessions are gladly made.

Appendix 17: Abstract (English)

English

This thesis examines the impact of the Covid-19 pandemic on the relation between leadership and performance and analyses what leadership styles are proving most effective to address the current crisis-related challenges. In total, three challenges caused by the pandemic are derived, namely: changed working conditions, a virtual environment and psychological distress. First, the work is concerned with the development of a theoretical basis, defining

central terms and taking a closer look at various influencing relationships. The qualitative study provides insights regarding the influence of the crisis on leadership and performance as well as the concrete handling of the current challenges by leaders. In particular, adaptations to the leadership style and the influence of leadership on performance in the context of the three challenges are examined. The results of this study indicate that in terms of changed working conditions, transformational, transactional, ethical, participative and empowering leadership positively impact performance. In relation to the virtual environment, transformational, empowering, participative and ethical leadership improves subordinates' performance and lastly, concerning in face of employees' psychological distress, empowering, ethical, transformational, transactional and directive leadership prove to be effective.

Appendix 18: Abstract (German)

German

In dieser Masterarbeit werden die Auswirkungen der Covid-19-Pandemie auf das Verhältnis zwischen Führung und Leistung untersucht, sowie analysiert, welche Führungsstile sich bei der Bewältigung der aktuellen krisenbezogenen Herausforderungen als besonders effektiv erweisen. Insgesamt werden drei durch die Pandemie verursachte Herausforderungen abgeleitet, nämlich: veränderte Arbeitsbedingungen, ein virtuelles Umfeld und psychische Belastung. Die Arbeit befasst sich zunächst mit der Entwicklung einer theoretischen Grundlage, definiert zentrale Begriffe und betrachtet verschiedene Einflussbeziehungen. Die qualitative Studie liefert Erkenntnisse über den Einfluss der Krise auf Unternehmen, Führungskräfte und Mitarbeiter sowie den konkreten Umgang von Führungskräften mit den aktuellen Herausforderungen. Insbesondere werden Anpassungen des Führungsstils und der Einfluss von Führung auf die Leistung im Kontext der drei Herausforderungen untersucht. Die Ergebnisse der Studie zeigen, dass sich transformationale, transaktionale, ethische, partizipative und empowernde Führung im Hinblick auf die veränderten Arbeitsbedingungen positiv auf die Leistung auswirken. In Bezug auf das virtuelle Umfeld verbessert transformationale, empowernde, partizipative und ethische Führung die Leistung der Untergebenen, und schließlich erweisen sich empowernde, ethische, transformationale, transaktionale und direktive Führung angesichts der psychischen Belastung der Mitarbeiter als wirksam.