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**Effective leadership for teams that become virtual  
during crisis times**

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**ABSTRACT:**

Virtual teams are becoming increasingly common in today's business world. They have developed as a response to technological progress and globalization. Globalization also enabled the spread of the COVID-19 pandemic. Due to the introduction of safety measures and lockdown, many employees had to switch from co-located (i.e., physically face-to-face) teams to virtual teams to keep businesses running. The objective of this thesis is to examine whether leaders need to adapt their leadership style in this new environment and to analyse if combining transformational and transactional leadership style is the most effective for teams that become virtual during crisis times.

In order to answer the research questions, the study was carried out as an exploratory study that utilizes qualitative data collected via interviews. Nine interviews in total were conducted from which 5 are with subordinates and 4 with team leaders. All interviewees worked previously in co-located teams that became virtual due to the COVID-19 pandemic. The participants work in various industries, companies, and countries and were interviewed on leadership and its impact on their perceived level of team efficiency. The collected data was then analysed through content analysis.

The results from the study suggest that leaders should adapt their leadership style in order to tackle the challenges associated with virtual teams such as communication or lack of social interactions. The study also indicates that combining both transformational and transactional leadership style is beneficial for the effectiveness of teams that have to shift to virtual work modes during crisis times. This new virtual environment necessitates guidance and framework skills that transactional leaders excel at, besides team cohesion and coaching, competencies related to transformational leadership style.

This study contributes to extending the limited research on leadership style for teams that were suddenly forced to transition to a fully virtual environment. Moreover, it provides practical insights on how managers should adapt their leadership style during these unprecedented times.

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**KEYWORDS:** leadership; transformational leadership style; transactional leadership style; virtual teams; team efficiency; COVID-19

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# 1 Introduction

## 1.1 Background

Rapid technological advances within the last decades have led to a new way of working. Henceforth, work can be performed anytime, anywhere due to technology (Cascio & Shurygailo, 2008). This technological progress has completely transformed mentalities, behaviours, and the work itself. Indeed, it enables individuals to communicate with each other in a complementary way to the traditional face-to-face approach. Individuals, groups, and organizations can interact using at the same time, synchronous (videoconferences, phone calls) and asynchronous (emails, text messages) communication means (Bell & Kozlowski, 2002).

This virtual environment and its diverse means of communication created a new framework for leadership and teamwork. In order to respond to this constantly changing and complex environment, many organizations have developed virtual teams. Virtual teams are defined as “groups of geographically, organizationally and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks” (Powell, Piccoli & Ives, 2004, p.7).

The COVID-19 pandemic has, besides the health concerns, caused an unprecedented social and economic crisis. Due to the introduction of safety measures and lockdown, many employees had to work remotely to keep businesses running. Hence, the pandemic accelerated the swift from co-located (i.e., physically face-to-face) teams to virtual teams. A study by Eurostat (2020) shows that, in 2019, the percentage of employed people who worked from home was 14.1% in Finland, which was the highest in the European Union, whereas France had a percentage of 6.6%. An important switch happened during the peak of the COVID-19 crisis, nearly 60 % of Finnish workforce was teleworking and French workers were 37.2% working remotely (Eurofound, 2020). As the world is rapidly changing, a different working environment will become a new reality for many workers.

Virtual teams have been made possible thanks to technology, but their growth is also due to the considerable advantages they can offer. Virtual teams provide the benefit of accessing a bigger talent pool as it allows organizations to select the most qualified individuals to work on a task regardless of location (Powell et al., 2004). At the same time, virtual teams are cost-effective as they can decrease the need for employee relocation and the cost linked to offices. They also enable companies to adapt more rapidly to increased competition and offer bigger flexibility to individuals working from home (Hunsaker & Hunsaker, 2008). Despite the potential benefits of virtual teams, virtual team members face a number of challenges. Existing research has identified 4 main challenges for virtual teams: building trust, communication, maintaining relationships, and the lack of social interaction (Berry, 2011; Dulebohn & Hoch, 2017; Malhotra, Majchrzak & Rosen, 2007).

Virtual environments, besides generating challenges for virtual team members, also impact how to lead them. Virtual leadership is not different from traditional leadership per se as the essence is the same: achieving goals through an influence process (Trivedi & Desai, 2012). Thus, virtual leaders have the same roles as co-located leaders as they have to motivate virtual teams' members to accomplish their defined target. However, in contrast to traditional teams, they have to practise leadership in a virtual environment in which communication is more complex (Bell & Kozlowski, 2002). Indeed, previous research has shown that the effect of leadership tends to decrease in virtual team situations, due to challenges of remote working (geographic dispersion, computer-mediated communication, time zone, cultural and language differences). Earlier studies have also been conducted to understand how physical distance affects communication and leadership performance (Neufeld, Wan & Fang, 2010). Without being physically present, it can be harder for virtual leaders to notice when team members are less motivated, when they need social interactions or when directions, common goals or resources are required. (Malhotra et al., 2007). Therefore, virtual teams required additional skills since behaviour in co-located teams cannot be simply transferred in virtual environments and expect to be successful (Zigurs, 2003).



Research has shown that effective teams have become crucial in fighting growing complexity and uncertainty of today's business world. When evaluating virtual team effectiveness, the two most common measures are team performance and individual satisfaction (Powell et al., 2004). Performance can be defined as the extent to which the output of a team, product, or service, meets the required standards set by the organization or the supervisor. Whereas satisfaction involves the team members' perception of the previously mentioned output as well as their need for personal development and growth (Lurey & Raisinghani, 2001). Fransen, Kirschner and Erkens (2011) mentioned team formation, characteristics and abilities of team members, clear role assignment, decision making strategies of teams, appropriate team leadership, and interdependency as the elements impacting team effectiveness. Therefore, the impact of virtual leadership on the level of team effectiveness should be studied.

However, little empirical research has been undertaken to evaluate the effect of virtual leadership on team effectiveness and even less studies have been conducted during crisis periods. Leadership challenges in remote working environments throughout crisis times are very different from leadership of traditional face-to-face teams during normal conditions (Jenster & Steiler, 2011). Indeed, a crisis can be characterized by volatility, uncertainty and complexity that requires fast and high-impact decisions within a limited information framework (Kaul, Shah & El-Serag, 2020). Leaders have to handle these aspects, besides learning new lessons and developing innovative problem-solving strategies to keep their company running.

The world has recently entered an unprecedented crisis, the COVID-19 pandemic. Virtual leadership is, for this reason, a significant and pertinent subject to consider. When leaders cannot be physically present, they confront new challenges while exercising leadership. Due to the crisis, individuals will have to work remotely more regularly than customary with the objective to decrease the spread of the virus. Thus, it might lead co-located teams to introduce virtual teams, either voluntary or forced. This

requires the development of new skills and behaviours to be apt to lead their labour forces remotely, something that these organizations might not have managed before.

Although the working environment and the manners to collaborate are quickly changing, most of the research has been done on leadership styles, leaders' performance in face-to-face contexts. Few research has been conducted in virtual environments. Indeed, prior research discussed how to communicate within virtual teams (Marlow, Lacerenza & Salas, 2017), how to augment virtual teams effectiveness (Dulebohn & Hoch, 2017), what challenges virtual teams confront (Malhotra et al., 2007; Dulebohn & Hoch, 2017) and their characteristics (Bell & Kozlowski, 2002). However, researchers have focused on teams that already work virtually, not about teams that needed to switch from previously co-located to virtual teams because of an external, unpredictable situation. Hence, as virtual teams are increasingly used in today's business world and since crises are most of the time unpredictable, understanding virtual leadership and its impact during a crisis such as COVID-19 pandemic can address important gaps in the literature.

## **1.2 Research question and purpose of the study**

Based on the problem gap, one main research question and two sub-questions are formulated:

How to effectively lead previously co-located teams that became virtual during crisis times?

-How does the shift between co-located to virtual teams impact the leadership styles used?

-Which leadership style is the most efficient in this new situation? Is this leadership style viewed differently by the manager and subordinate?

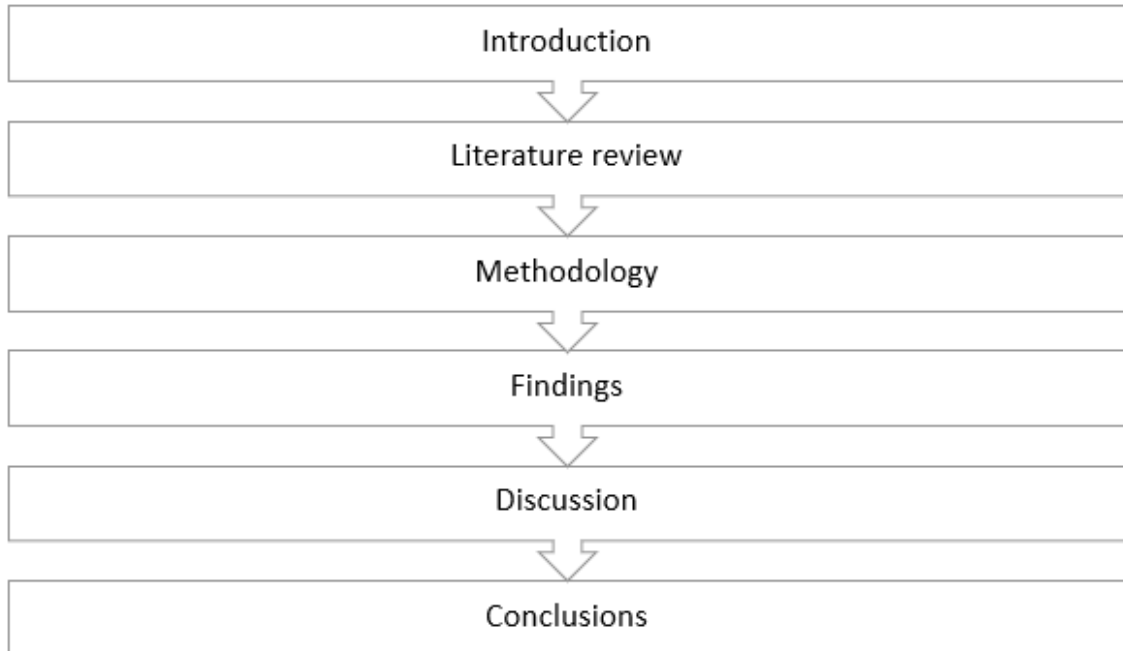
The research questions and its aims are inevitably linked as they are interdependent in explaining the research (Doody & Bailey, 2016). Hence, this research's main question aims to determine how to effectively lead previously co-located teams that became virtual during crisis times? To better understand how to effectively lead a virtual team during crisis times two sub-questions have been defined. The first sub-question aims to explore if and how leaders adjust their leadership styles when leading a previously co-located team in a virtual setting. It also aims to understand what led to this change. The second sub-question aims to reach a deeper understanding concerning which leadership style is the most effective during these times. It also aims to understand if managers and subordinates are having the same point of view concerning which leadership style is the most efficient in this context.

### **1.3 Structure of the study**

The thesis is divided into 7 chapters. First, chapter 1 Introduction, discusses the background and purpose for the study as well as the research questions. Following the introduction, literature review has been divided into three chapters, from which the first two are based on the key concepts of the thesis, chapter 2. Leadership and chapter 3. Virtual teams. The last chapter of the theoretical part, chapter 4. Leading virtual teams discusses these two concepts with respect to each other. In chapter 5. Methodology, methodological choices are presented as well as the execution of the study. In addition, validity, reliability, and ethicalness of the study are examined. The chapter 6. Findings presents the main empirical results from the interview data. Chapter 7. Discussion discusses the findings with respect to the literature review. In chapter 8. conclusions are presented with possible future research suggested.

**Figure 1**

*Structure of the thesis*



## **2 Leadership**

Leadership is one of the key concepts of this thesis. In order to gain deeper insights into this topic, the first part of this chapter defines the term leadership followed by the role of leadership in team effectiveness. This thesis aims to understand if the shift between co-located to virtual teams impacts the leadership styles used and which leadership style is the most effective in this new context. Therefore, the second part of this chapter focuses on leadership styles theory since it is important to explain the different leadership styles approaches and how they evolved over time.

### **2.1 What is leadership?**

Establishing a definition of the term leadership has shown to be challenging for both researchers and practitioners. Indeed, leadership possesses a large range of definitions. Stogdill (1974) mentioned in a study of leadership research that "there are almost as many different definitions of leadership as there are people who have tried to define it." Griffin and Pustay (2005, p.434) defined leadership as "the use of noncoercive influence to shape the goals of a group or organization, to motivate behaviour toward reaching those goals, and to help determine the group or organizational culture". According to Yukl (2012), the essence of leadership in organizations is to influence and facilitate individual and collective efforts in order to accomplish common goals. Researchers have been interested in examining and explaining the way in which a leader obtains, maintains, and practices influence in a group (Anderson & Sun, 2015). However, there is no general agreement between researchers on how a leader obtains and applies this influence.

While defining leadership it is important to distinguish it from management. The two terms are often used interchangeably in the workplace. Management could be distinguished from leadership by associating it to planning and control since they come with formal rights, whereas leadership could be related to feelings, meaning as well as

values. However, it is not because an individual has a manager title that he is solely doing management tasks, a manager can also exercise leadership (Alvesson, Blom & Sveningsson, 2017). Northouse (2013) also relates to this as he explained that many activities associated with leadership are also linked to management. However, he links organizing, budgeting, staffing, planning, controlling, and problem-solving to management whereas leadership is related to aligning people, establishing direction, motivating, and inspiring others.

## **2.2 Leadership role in team effectiveness**

Powell, Piccoli and Ives (2004b, p362) define team effectiveness as "group-produced outputs and the consequences a group has for its members". This definition could be split in two, the first part "group- produced outputs" referring to the performance aspect and the second part "the consequences a group has for its member" involving the satisfaction aspect. Performance can be defined as the extent to which the output of a team, product, or service, meets the required standards set by the organization or the supervisor. Whereas satisfaction involves the team members' perception of the previously mentioned output as well as their need for personal development and growth (Lurey & Raisinghani, 2001). Thus, team effectiveness can be defined in terms of the following:

- team performance: the ability to deliver a timely, high-quality outcome
- individual satisfaction: the ability to satisfy individual team members' needs (Powell, Piccoli & Ives, 2004b)

Research has displayed that leaders can make an important difference to team effectiveness (Morgeson, 2005). Indeed, in the model of teamwork argued by Salas, Sims, and Burke's (2005), team leadership is one of the "Big Five" contributors to team effectiveness. Moreover, it has been discussed that leaders play critical roles in creating effective teamwork, and in implementing directives for team members to engage in successful team processes (Cascio & Shurygailo, 2008). Leadership turns out to be an

integral element of effective teamwork. Therefore, in order to understand how to effectively lead virtual teams it is important to examine the different theories of leadership.

## **2.3 Leadership styles**

Leadership style is the manner and approach of providing direction, implementing plans, and motivating people (Newstrom, Davis, 1993). Throughout the course of history, leadership research has evolved resulting in an increase in the number of leadership styles. Leadership style, if effective, has a positive and significant impact on job satisfaction and on the employee performance (Pawirosumarto, Sarjana & Gunawan, 2017). This significant relationship between leadership styles and organizational performance created more interest towards this topic. Thus, many studies have been conducted concerning this aspect of leadership that led in various leadership theories.

### **2.2.1 Trait theory**

Early ideas about leadership were centred around trait theory, also called “Great Man” theory, which is the notion that leaders exhibit certain traits more than non-leaders (Johns & Moser, 1989). With this leader-centric approach, the trait theory of leadership focuses only on the leader’s characteristics and qualities, not in the context or the followers. Since leadership, in this approach, is seen as a set of relatively constant and enduring personal traits or physical properties, specific characteristics differentiate effective from ineffective leaders. For instance, Kirkpatrick and Locke (1991) identified traits which consist of the passion for leading, energy and ambition, self-confidence, honesty and integrity, and knowledge. The trait approach tends to favour leadership styles such as dictatorial or authoritarian. In the early 20th century, there was a large application of trait theory to leadership in business and politics. However, by the middle of the century, this approach was declining (Nawaz & Khan, 2016).

Indeed, critics argued that the trait theory is not an adequate method to define if a leader is successful or not since traits alone are not sufficient for leadership success. Leaders who have those traits should also make specific efforts in order to be successful. (Kirkpatrick & Locke, 1991). Moreover, another criticism of this theory is the lack of a coherent relation between leader-follower interaction and influence. Meuser, Gardner, Dinh, Hu, Liden and Lord (2016) discovered that researchers have not been capable of articulating an interconnection between social identity, identification processes and followership, which is crucial to the emergence of influence.

As criticisms of trait theory raised, researchers began to examine leadership not just from a leader-centric approach with leaders' traits and positional authorities, but also in terms of the role of followership in the leadership process (Uhl-Bien, Riggio, Lowe, & Carsten, 2014). Researchers acknowledged that outcome accomplishment might also depend on the context and on the influence of followers (Gregoire & Arendt, 2014). Hence, leadership theorists decided to go further than the only traits of leaders by examining how the behaviour of leaders impact its effectiveness, leading to the creation of behaviour-based leadership theories (Gregoire & Arendt, 2014).

### **2.2.2 Behavioural theory**

The behaviour theorists of leadership analysed the actions of the leader instead of their personality traits (King, 1990). This theory of leadership proposes that particular behaviours distinguish leaders from non-leaders. The primary view of behaviour theory is that while the leader focuses on achieving the task, he is also concerned on group cohesiveness as well as the individual members of the group (King, 1990). This theory evolved when two studies, Katz, Maccoby, Gurin and Floor in 1951, and Stogdill and Coons in 1957, identified two initial considerations: task-oriented vs. relationship-oriented leadership.



A significant number of research was conducted concerning behaviour theory, distancing researchers from the earlier trait theory (King, 1990). However, there were still aspects that were not examined. Indeed, these studies of leadership did not take into consideration subordinates nor their role (Malakyan, 2014). Moreover, the behaviour studies neglected the context and environment of the leader.

### **2.2.3 Situational and Contingency theory**

The situational theory was created to acknowledge that the environment has an impact in the leader-subordinate dynamic. In this theory, there is a recognition that some environmental aspects must be considered (King, 1990). For instance, situational research takes into consideration, besides the nature of the working environment, the task itself and the social status of all parties (Bass, 1960). This theory acknowledges that the leader might be less important than the environment in which the leader-subordinate dynamic takes place (King, 1990). In situational theory, leadership becomes separated from the individual as a leader. Instead, Middlehurst (2008) explains that leadership can be seen as a process by which the organization achieves its goals. There is also a recognition that a leader has to adapt to the context. Indeed, according to Johns and Moser (1989) the capability to adapt leads to more efficient leaders.

The recognition of adaptability as a trait contributed to a new view of leadership. This area of study has been named contingency. In this theory, effective leadership is viewed as dependent on factors such as personality, behaviour, influence, and the situational environment (King, 1990). In the contingency approach, leadership is seen as fluid and changing according to the situation (Ronay & Vugt, 2014).

### **2.2.4 Leadership in the modern era**

Over time, the view of successful leadership and effective leaders has changed significantly. We cannot longer find The Great Man. Leaders are no more seen as solely

charismatic individuals using power to lead others. Henceforth, leadership is viewed as a process that is linked to the individuals and the environment. In the modern era, researchers have developed new leadership styles theories such as transformational and transactional (Burns, 1978). In these theories, the interaction between leaders and followers, subordinates, is taken into consideration which is a step further compared to prior research.

### **3 Virtual Teams**

This thesis focuses on the shift between co-located to virtual teams due to the COVID-19 outbreak and its impact on leadership. Therefore, this chapter aims to address what are virtual teams as well as their characteristics, followed by the challenges they involve.

#### **3.1 Defining Virtual Teams**

Research in virtual teams has risen since the early 1990s, in parallel to the popularity of virtual communication tools such as e-mails, video conferences, and other collaborative software. Researchers have developed various definitions of virtual teams such as “Virtual teams are groups of people who work interdependently with shared purpose across space, time, and organization boundaries using technology to communicate and collaborate” (Lipnack & Stamps, 2000, p.18) or “Virtual teams are teams whose members are geographically distributed, requiring them to work together through electronic means with minimal face-to-face interaction” (Malhotra et al., 2007, p.60).

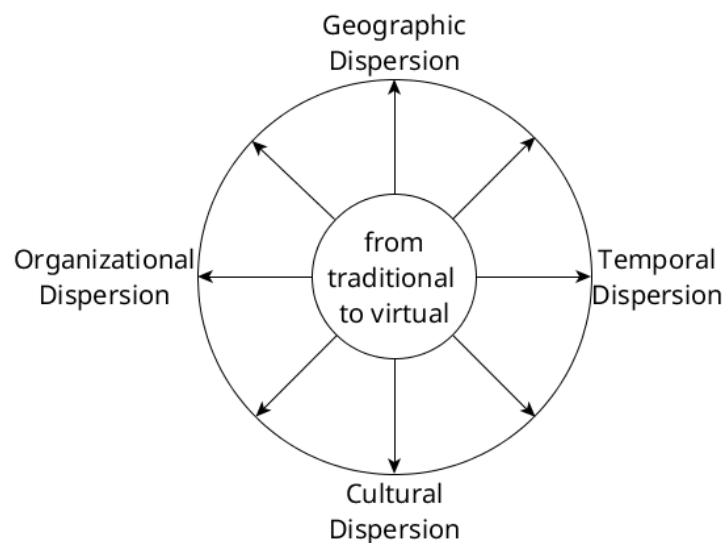
Although the specific words of these definitions might vary, they share three characteristics that Cohen and Gibson (2003) summarized. First, a virtual team is a functioning team. In other words, it is individuals who work on tasks that have diverse degrees of interdependence and mutual responsibility to achieve a common aim. Second, these individuals are dispersed in certain ways. Third, members of virtual teams mainly rely on technology-mediated communications to exchange with colleagues rather than interacting face-to-face in traditional teams.

Traditional face-to-face teams and virtual teams are not fully opposite. Instead, teams are located on a continuum that represents diverse degrees of virtuality. Co-located teams can therefore also show high levels of ‘virtuality’ as geographic dispersion is not the sole factor that defines a virtual team. (Kirkman & Mathieu, 2005)

Zigurs (2003) suggests a framework to consider the ‘virtuality’ of virtual teams in four significant dimensions: geographic; temporal; cultural and organizational (see Figure 1). The more aspects on which the team is dispersed, the more virtual the team is.

**Figure 2**

*Dimensions of Virtual Teams.*



### 3.1.1 Geographic dispersion

This dimension is characterized by an absence of physical proximity among team members who are geographically dispersed (Bell & Kozlowski, 2002; Dulebohn & Hoch, 2017; Malhotra et al., 2007). Driskell, Radtke and Salas (2003, p.297) stated, “The core feature of a virtual team is that it is one in which interdependent group members work together on a common task while they are spatially separated”, and Bell and Kozlowski (2002, p.22) argued, “The most critical and important feature of virtual teams is that they cross boundaries of space”. The exact distance that separates team members is not the most important. Indeed, the most significant is the impact this geographic separation has on how team members communicate. (Bell & Kozlowski, 2002) This means that as long as a team is not physically near, no matter the distance, it becomes virtual since the means of communication will change.

Although many traditional teams also utilize virtual tools to interact such as e-mail, they are more of a complement to face-to-face communication (Bell & Kozlowski, 2002). The most significant impact of spatial distance is the decrease on spontaneous interactions (O'Leary & Cummings, 2007).

### **3.1.2 Temporal dispersion**

Temporal dimension is the extent to which team members' normal work hours overlap due to different time zones (O'Leary & Cummings, 2007). Although geographical dispersion can naturally affect temporal dispersion, a team can be dispersed across time without being dispersed across space. Indeed, the synchronicity of the means of communication also determines the temporal dispersion. Asynchronous communication tools, such as emails bring a higher degree of temporal dispersion compared to real-time communication, such as videoconferences (Bell & Kozlowski, 2002).

O'Leary and Cummings (2007) argued that the potential for real-time problem solving reduces as the degree of temporal dispersion increases since it makes synchronous interaction less frequent and more complicated. Although asynchronous exchanges degrade communication quality and alter team member coordination, asynchronous communication enables members to take time to consider both the message and their answer. Team members can, for instance, consult other resources or consider the issue further before responding (Kirkman and Mathieu 2005).

### **3.1.3 Cultural dispersion**

Since boundaries of space and time do not limit virtual teams, they can also transcend cultural boundaries. Cultural dispersion has been identified as the most common

dimension of global virtual teams (Krumm, Terwiel & Hertel, 2013). Gibson and Gibbs (2006, p.460) explained that “establishing effective internal communication and a shared vision for innovation is challenging when team members represent different nations”. Indeed, variations in language, tradition, and cultural values creates different expectations for communication practices and decreases identification with the team as a whole (Bell & Kozlowski, 2002; Gibson & Gibbs, 2006). To better cope with cultural dispersion, virtual teams should emphasize the role of norms for teamwork and use common values (Krumm et al., 2013).

### **3.1.4 Organizational dispersion**

Virtual teams can also cross organizational boundaries to access the most qualified individuals, those with needed expertise or experience (Lipnack & Stamps, 1997). These individuals may be outside consultants or organizational members operating from different sites. As Bell and Kozlowski (2002) explained this characteristic is closely related to the dimension of cultural dispersion since crossing organizational borders might contribute to crossing cultural borders too. When organizational dispersed team members work together, differences of work methods, goals, and culture come simultaneously, which might negatively affect collaboration as well as communication (Duarte & Snyder, 2006).

The context of this thesis being the switch of previously co-located team to virtual team because of the COVID-19 outbreak, the scope of this paper will only consider the geographic and temporal dimensions. Since this shift impacts physical proximity and might affect the synchronicity of communication.

In addition, these characteristics of virtual teams might create benefits for organizations. Ebrahim, Ahmed & Taha (2009) have summarized the main advantages related to virtual teams, shown in table 1.

**Table 1**

*Some of the main advantages associated with virtual teams (Ebrahim et al., 2009, p.2657)*

Advantages	References
Reducing relocation time and costs, reduced travel costs (Virtual teams overcome the limitations of time, space, and organizational affiliation that traditional teams face (Piccoli et al., 2004))	(McDonough et al., 2001, Rice et al., 2007, Bergiel et al., 2008, Cascio, 2000, Fuller et al., 2006b, Kankanhalli et al., 2006, Prasad and Akhilesh, 2002, Olson - Buchanan et al., 2007, Boudreau et al., 1998, Biuk-Aghai, 2003, Liu and Liu, 2007, Lipnack and Stamps, 2000)
Allow organizations to access the most qualified individuals for a particular job regardless of their location	(Criscuolo, 2005, Cascio, 2000, Samarah et al., 2007, Fuller et al., 2004, Badrinarayanan and Arnett, 2008, Prasad and Akhilesh, 2002, Boudreau et al., 1998, Boutellier et al., 1998)
Greater degree of freedom to individuals involved with the development project	(Ojasalo, 2008, Badrinarayanan and Arnett, 2008, Prasad and Akhilesh, 2002)
Provide organizations with unprecedented level of flexibility and responsiveness	(Powell et al., 2004, Hunsaker and Hunsaker, 2008, Chen, 2008, Guniš et al., 2007, Prasad and Akhilesh, 2002, Pihkala et al., 1999, Piccoli et al., 2004, Liu and Liu, 2007)
Respond quickly to changing business environments	(Bergiel et al., 2008, Mulebeke and Zheng, 2006)
Greater degree of freedom to individuals involved with the development project	(Ojasalo, 2008, Badrinarayanan and Arnett, 2008, Prasad and Akhilesh, 2002)

## **3.2 Virtual teams' challenges**

Although using virtual teams provides several benefits as seen in table 1, some challenges and pitfalls also arise with them. (Ale Ebrahim, Ahmed & Taha, 2009). Existing research has identified 4 main challenges for virtual teams: building trust (Buvik & Tvedt, 2016; Malhotra et al., 2007), communication (Alsharo, Gregg & Ramirez, 2017; Berry, 2011; Dulebohn & Hoch, 2017), maintaining relationships (Gibson & Gibbs, 2006; Pauleen & Yoong, 2001), and the lack of social interaction (Berry, 2011; Dulebohn & Hoch, 2017). The challenge of establishing trust being mostly for virtual teams that have never worked previously together, in this thesis we will consider the challenge of maintaining trust instead of only building it. This aspect will be associated with the challenge of maintaining relationships. Therefore, we will now examine the challenges mentioned above of communication, lack of social interaction, maintaining relations and trust.

### **3.2.1 Communication**

Previous research has identified team communication as one of the major challenges related with virtuality (Alsharo, Gregg & Ramirez, 2017; Cheng, 2008). Jones, Oyung and Pace (2005, p.18) argued "The quality and speed of communication drive the effectiveness and efficiency of the team". Indeed, communication in virtual teams is an essential predictor of diverse outcomes such as team performance and employee commitment (Nydegger & Nydegger, 2010). However, as virtual team's communication is typically based on computer-mediated asynchronous information, misinterpretations and misunderstandings might arise since it is impersonal, nonverbal cues are unidentifiable and there is a lack of context (Berry, 2011).

The choice of computer-mediated communication technology has an important impact on communication because each method provides a different capacity to bring verbal and nonverbal cues. That is why it is recommended to use several types of computer-



mediated communication technologies either concurrently such as video conferencing accompanied by synchronous electronic conferencing or consecutively such as providing documents via email first, followed by gathering over the phone (Dennis, Fuller & Valacich, 2008).

Moreover, Marlow et al. (2017) propose a framework constituted by two communication quality criteria: communication timeliness and Closed-loop communication. Communication timeliness is pertinent to virtual teams' interaction since they often work in different time-zones, some members might receive messages off-hours, and process it later, thus creating time delayed communication. In addition, working in a virtual environment may also hinder the possibilities of synchronous communication. These limits can impact team performance and problem-solving abilities. On another side, closed-loop communication aims to reduce misunderstandings among virtual teams' members. This requires that the message sender ensures that the message was received as well as understood by team members, hence closing the loop of communication (Marlow et al., 2017).

### **3.2.2 Lack of social interaction**

The absence of social interaction due to the use of virtual tools in virtual teams creates another challenge. Indeed, Schlenkrich and Upfold (2009, p.109) stated "Social interaction forms a vital part of any team experience". Informal communication has been demonstrated to support the feeling of being a part of a united team (Herbsleb & Mockus, 2003), thus, improving team members' collaboration (Pauleen and Yoong, 2001). Virtual teams have limited opportunities for the informal and spontaneous exchanges that often happen in shared spaces such as hallways or coffee machines. In co-located teams, spontaneous communication (such as 'coffee talk') can represent for up to 75 minutes of a workday (Herbsleb & Mockus, 2003). As a result, communications in virtual teams are often more formal than in co-located settings and concentrate more on work-related problems (Berry, 2011).

A decrease in informal social contact or spontaneous communication can lead to a lower degree of knowledge sharing (Morgan, Paucar-Caceres & Wright, 2014). In addition, due to the lack of social interaction team members can develop feelings of isolation and detachment. These feelings can affect the work performance, job satisfaction and motivation (Kirkman, Rosen, Gibson, Tesluk & McPherson, 2002). Kirkman et al., (2002, p.73) noted that “While individuals with strong social needs may find virtual teamwork difficult, others desire independent, virtual work”. Hence, feelings of isolation can highly vary according to individuals.

### **3.2.3 Maintaining trust and relationships**

Trust has been called “the glue” of the workplace (Crisp & Järvenpää, 2013). Indeed, prior research has shown that trust is positively correlated to team commitment and performance (Buvik & Tvedt, 2016). However, in virtual teams, it is harder to maintain trust due to difficulties having in-depth personal interactions caused by the lack of nonverbal cues. Trust is also determined by the frequency of interactions, which may be smaller in a virtual environment. (Morrison-smith & Ruiz, 2020)

Relationships are also affected by how much individuals interact as Gibson and Gibbs (2006, p.459) explained “The strength of a tie (or social relationship) is a function of the amount of interaction, emotional intensity, and reciprocity between any two individuals”. The maintenance of relationships is, similarly as the maintenance of trust, crucial for virtual teams. Indeed, strong relational ties are related with an increase in creativity, motivation, morale, better decisions, and fewer process losses. (Pauleen & Yoong, 2001).

### **3.2.4 Technology**

Although technology offers a wide range of benefits, its use also creates complexity especially where different types of technologies are utilized (Kirkman et al., 2002). Hambley, O'Neill and Kline (2007) argue the importance of choosing appropriate technology and media through which virtual teams' members can communicate and collaborate the most efficiently. Identifying the most relevant technology and media can augment the interactions efficiency and cohesion between team members, which might positively affect teams' performance (Bal & Teo, 2001). It is essential to make sure that teams are utilizing technology with high social presence which may necessitate complex technological applications.

Moreover, some organisations can face additional challenges when there is a lack of knowledge among some senior middle-aged managers regarding advanced technological applications. Johnson, Heimann and O'Neill (2001) also recognize that virtual teams can create psychological challenges for employees' who suffer from technophobia, employees who are uncomfortable with computers and other telecommunications technologies. In order to tackle this challenge, Bal and Teo (2001) emphasized the need of providing training, particularly as part of employees on boarding induction.

### **3.2.5 Other challenges**

In addition to these 4 main challenges, Ebrahim et al. (2009) include other pitfalls that organizations using virtual teams might face. These additional challenges are displayed in table 2.

**Table 2**

*Additional challenges associated with virtual teams (Ebrahim et al., 2009, p.2658)*

Challenges	References
Decrease monitoring and control of activities	(Pawar and Sharifi, 1997)
Everything to be reinforced in a much more structured, formal process	(Lurey and Raisinghani, 2001)
Challenges of managing conflict	(Hinds and Mortensen, 2005, Ocker and Fjerm est ad , 2008, Kayworth and Leidner, 2002, Piccoli et al., 2004, Wong and Burton, 2000, Ramayah et al., 2003)
Variety of practices (cultural and work process diversity) and employee mobility negatively impacted performance in virtual teams	(Chudoba et al., 2005)
Team members need special training and encouragement	(Ryssen and Godar, 2000)

## **4 Leading virtual teams**

The main objective of this thesis is to understand how to effectively lead previously co-located teams that became virtual during crisis times. Thus, it is important to understand what virtual leadership is. This thesis aims to gain deeper insights on which leadership style is the most efficient in this new context. Therefore, the second part discusses two leadership styles, transformational and transactional, that have demonstrated to be successful in virtual environments.

### **4.1 Virtual leadership**

Leadership is vital to retain efficiency and motivation in virtual teams (Hoch & Kozlowski 2014). Virtual leadership, also called e-leadership, is not different from traditional leadership per se as the essence is the same: achieving goals through an influence process. It is the medium use for implementing the goals that differ (Trivedi & Desai, 2012). Moreover, some research has claimed that virtual leadership is based on the same competences that traditional leadership (Savolainen, 2013). In addition, Trivedi, and Desai (2012) argue that the fundamental leadership objectives associated with vision, direction, motivation, inspiration, and trust are staying the same.

However, the exercise of virtual leadership is not the same as traditional leadership practiced face-to-face (Hoch & Kozlowski, 2014). Indeed, the different virtual team characteristics and challenges, previously mentioned in chapter 2, affect how to lead them. Virtual teams are more difficult to lead than face-to-face teams due to their virtual nature (Bell & Kozlowski, 2002; Gibson & Gibbs, 2006). In contrast to leaders of co-located teams, virtual leaders do not have the possibility to physically observe their team members. Without being physically present, it can be complex for a virtual leader to notice when team members are slowing down, less motivated, when they need social interactions or when directions, common goals or resources are needed. (Malhotra et al., 2007). In addition, Bell, and Kozlowski (2002) note that virtual leaders have, in

comparison with traditional leaders, some restrictions which can hamper some functions of leadership, such as the possibility for team members development. Thus, it can be more complex for virtual leaders to exercise their usual coaching, mentoring, and development functions. Therefore, virtual teams require additional skills since behaviour in co-located teams cannot be simply transferred in a virtual context and expect to be successful (Zigurs, 2003).

Virtual leadership creates a different way of leading. Although accomplishing results through influence processes is the goal, it must be done with another approach compared with traditional leadership because of a lack of face-to-face interaction and different means of communication, etc. “The nature of virtual interaction, characterized by lack of physical cues and body language, fewer informal opportunities to collaborate with peers, and increased risk of isolation, warrants an in-depth understanding of effective strategies for virtual leadership” (Byrd, 2019, p.20). Therefore, virtual leaders have to adapt to the requirements of virtual environments and find tools to manage these new challenges. Virtual leadership differs from traditional one, not in its essence but how it is, and how it can be practiced. As Malhotra et al. (2007, p.68) argued “When firms become virtual, the need to change work and leadership practices is imperative”.

### **4.3 Virtual leadership styles**

A large amount of research has been conducted on transactional, transformational, and laissez-faire leadership styles. Laissez-faire style can be defined by a lack of leadership, in which the leader avoids making decisions or taking responsibility and does not use his authority to improve the team’s performance (Antonakis, Avolio & Sivasubramaniam, 2003). Due to its characteristics, this style is not seen as effective for any type of team, including virtual teams. (Bogler, Caspi & Roccas, 2013) However, prior research suggests that transactional and transformational leadership are two efficient leadership styles for successful virtual teams (Gross, 2018; Hambley et al., 2007). Therefore, this thesis will concentrate on these 2 leadership styles.

### 4.3.1 Transformational leadership style

The first advocate of transformational leadership theory was Burns (1978, p.426) who defined transformational leadership as "a process whereby leaders promote the motivation of their followers to pursue and accomplish higher goals the collective interest of the group". Avolio and Bass (1995) moved the theory forward, recognizing the four components of transformational leadership, the "four I": idealized influence (charisma), inspirational motivation, intellectual stimulation, and individualized consideration. Abdalla (2010) defined the four elements of transformational leadership classified by Avolio and Bass (1995) as follows:

**1. Idealized influence:** applies to the leaders who inspire respect and trust in their subordinates. Leaders who follow this behaviour emphasize trust which encourages subordinates to adhere to the long-run objectives of the organisation and lead them to achieve their goals.

**2. Inspirational Motivation:** refers to the leader's ability to inspire confidence, motivation, and a sense of purpose in his followers. This element involves encouraging teamwork, implementing high expectations for the team, and expressing confidence in the team's capacity to accomplish those expectations.

**3. Intellectual stimulation:** implicates encouraging subordinates to challenge assumptions, take risks, approach old issues in new ways, and be creative. In order to do so, the leaders give greater autonomy to their subordinates. This open environment helps the leaders to motivate the followers by seeking other paths to approach the problems in which they can be involved in their work.

**4. Individualized consideration:** is achieved by recognizing the unique needs and abilities of followers. This behaviour focuses on training and coaching which is beneficial for the subordinates' needs for achievement and growth.

As these four components display, transformational leadership style is oriented to relationships between members. It brings consideration to employees through guidance. Transformational leadership is positively correlated with job satisfaction, employee commitment and trust, increasing job performance and fewer turnover intentions (Avolio, Bass, & Jung, 1999). In addition, many studies on leadership styles indicate that transformational style of leadership is the preferred and most suited style for organizational performance and achieving organizational objectives (De Jong & Bruch, 2013).

Transformational leadership style is significant in the virtual environment. Indeed, in this context members are working together via technological means with minimal face-to-face interaction. Hence, maintaining trust, relationships, as well as motivating team members can be challenging for virtual team leaders. Therefore, leaders who use the transformational leadership style focus on building trust which consequently promote an atmosphere of growth and a trust-based environment. Both leaders and followers view their environment as a significant aspect for accomplishing objectives (Hyman-Shurland, 2016). Similarly, Hassan and Ahmed (2011) discussed that trust was the key aspect for people working together to reach common goals as well as building effective relationships and better communication.

In addition, transformational leaders encourage team collaboration and cohesion to maintain strong social ties. Highlighting team cohesion is important to tackle the challenges linked to virtual environment (Malhotra et al., 2007). In this style, leaders also emphasize monitoring and coaching (Gross, 2018). It can be positive in a virtual context as we saw that coaching and training are important since it can help team members to reach their goals and prevent issues such as with technology. In addition, transformational leaders focus on promoting autonomy. As mentioned above, motivating followers can be challenging in a virtual environment. However, this open environment can help leaders to motivate the subordinates by seeking other ways to approach the problems in which they might be involved in their work.



### 4.3.2 Transactional leadership style

In previous research, transformational leadership, relationship-oriented, was often opposed to transactional leadership, task-oriented. The fundamental concept of transactional leadership is the understanding of the relationship between effort and reward. Indeed, in this leadership style followers are rewarded for meeting specific goals or performance criteria. Rewards and positive reinforcement are provided or mediated by the leader (Burns, 1978). Hence, transactional leadership is more practical in nature because of its emphasis on meeting specific targets or objectives. Another aspect of this theory is that the subordinates are not self-motivated. They have to be closely monitored in order to fulfil their tasks and objectives (Burns, 1978). The power of transactional leaders comes from their formal authority and responsibility in the organization. The principal goal of the follower is to execute the instructions of the leader.

According to Bass and Avolio (1995) transactional leadership theory is developed on the basis of three primary factors:

- 1. Contingent reward approach:** the leader provides rewards in exchange of meeting the objectives or the ability of followers to achieve tasks based on what the leaders' wants.
- 2. Passive management-by-exception:** the leader intervenes only when subordinates do not meet acceptable performance levels and initiates corrective action to improve performance. The leader may use punishment as a response to unacceptable performance.
- 3. Active management-by-exception:** when the leader uses an active approach, his wish is to prevent mistakes. Thus, the leader involves himself consistently in the work process and watches for deviations from rules and standards, intervening before employees make errors.

In the virtual team context, the contingent reward dimension of transactional leadership style is relevant. Indeed, Malhotra et al. (2007) argue that acknowledging achievements is required in a virtual environment. According to the authors rewarding subordinates increases their efficiency as it improves their learning through experience, thus, helps them to acquire new knowledge. Moreover, according to Bass, Avolio, Jung and Berson (2003) contingent reward is positively correlated with employee commitment. Burke, Stagl, Klein, Goodwin, Salas, and Halpin (2006) also argue that active management-by-exception is related to giving subordinate feedback. As Fisher and Fisher (2001) as well as Bell and Kozlowski (2002) explain, feedback is vital for successful teams. Thus, contingent reward and active management-by-exception can improve the level of effectiveness of virtual teams. Passive management-by-exception has not been seen as beneficial for virtual teams. Therefore, in this research only contingent reward and active management-by-exception are considered.

Moreover, transactional leadership style implies giving clear and detailed picture of the team objectives which is well understood and agreed upon by all the team members. This can be beneficial in virtual teams' context, as communication and setting clear expectations are crucial for the effectiveness of teams that are not co-located (Watkins, 2013). In addition, transactional leaders establish clear roles for each team member, besides assigning accountability for each task. As Fisher and Fisher (2001) argue, in a virtual context assigning clear roles and responsibilities have a high impact on the virtual leader's effectiveness.

#### **4.3.3 Combining transformational and transactional leadership style**

Although De Jong and Bruch (2013) identify transformational to be more effective than transactional leadership, a combination of these leadership styles may benefit virtual team's leaders. Previous research explains that leaders can be both transformational and transactional and suggests that the most efficient leaders use both behavioural

styles (O’Shea, Foti, Hauenstein & Bycio, 2009; Avolio et al., 1999). Indeed, trust is vital in a virtual team context (Crisp & Järvenpää, 2013) and transformational leaders excel at developing and maintaining trust amidst team members (Avolio et al., 1999). By highlighting team cohesion, transformational leaders also improve cooperative climate within the team, besides maintaining strong social ties. Leaders using transformational leadership style also ensure coaching as well as autonomy. Nevertheless, it is insufficient for virtual teams to simply focus on trust, team collaboration, autonomy, and coaching because task cohesion is also fundamental in this context. Task cohesion is a skill related to transactional leadership style. Indeed, transactional team leaders communicate expectations, provide feedback, and establish clear roles for each team member to guide them. As this new environment is likely to create confusion for the followers, guidance might become even more significant. Therefore, combining transformational and transactional leadership style can provide virtual teams with the benefits associated with both styles.

Research also found that transactional leadership is associated with higher output performance and productivity, while transformational leadership is associated with greater satisfaction and team cohesiveness (Hoyt & Blascovich, 2003). As team effectiveness can be defined in terms of performance and satisfaction, combining transformational leadership style with transactional leadership style could provide higher team effectiveness in a virtual environment (Powell et al., 2004b).

**Table 3**

*Transformational and transactional leadership style elements*

Elements	Transformational leadership style	Transactional leadership style
Ensuring team cohesion	X	
Promoting trust	X	
Providing recognition and rewards		X

Providing bigger autonomy	X	
Establishing clear expectations		X
Providing feedback		X
Monitoring of team members		X
Assuring coaching and training	X	
Assigning clear roles and responsibilities		X

## **5 Methodology**

This chapter discusses the methodology of the study. Research philosophy behind the study is presented, and the choices concerning research approach and research design are introduced and explained. The way in which the data was collected and further analysed are also discussed.

### **5.1 Research philosophy and approach**

Research philosophy can be understood as the way each individual develops his knowledge. It includes assumptions about how the researcher views the world depending on his own values and beliefs. These assumptions then support the understanding of the research question as well as the chosen methods and the interpretation of the findings (Saunders, Lewis & Thornhill, 2009). The research philosophy in this thesis is interpretivism. Saunders et al. (2009, p.140) explained that in a business context, this paradigm aims to take different perspectives of different groups of people from an organization to “create new, richer understandings and interpretations of social worlds and contexts”. Indeed, this research philosophy does not want to create universal ‘laws’ that apply to everybody but rather aims to explain that individuals can be different, *per se*, and be under different circumstances which lead to different meanings, and, thus, create different social realities, experiences and interpretations. As this thesis tries to grasp the various perceptions leaders and subordinates have on the shift from co-located to virtual team and on which leadership style is the most effective, interpretive paradigm best describes the way this research is carried out.

Research approach refers to the utilization of existing literature in academic research. The most commonly used methods are deductive and inductive research approaches. Deductive research approach can be understood as an approach where hypotheses are derived from existing literature and then tested. On the contrary, in an inductive approach, the theory is derived from the data, which is collected and analysed before

theory formulation (Saunders et al., 2009). This study uses an inductive approach. Indeed, this study was executed by first carrying out a literature review to get an understanding of the phenomenon and to determine suitable interview questions. Secondly, the interviews were conducted. Finally, the interview data was analyzed, and appropriate theories were drawn from it. Utilizing an inductive approach was beneficial for this study as it does not restrict the scope of the study to only certain assumptions that are deducted from the theory (Saunders et al., 2009). Indeed, the existing literature in leadership is extensive, however, there is not as much research on leadership for teams that became virtual during crisis times. Hence, using very structured hypotheses could limit the research too much.

## **5.2 Research purpose and design**

The research purpose is simply the aim of the research. The purpose of this thesis is exploratory, meaning that it seeks to throw light on a phenomenon that is relatively recent and unexplored as well as give new insights on this topic (Saunders et al., 2009). As mentioned previously, leadership in virtual teams as a concept has gained a lot of attention from researchers, but leadership after the shift from co-located teams to virtual teams during crisis times has a lot to discover due to very limited existing literature. Hence, exploratory research purpose is suitable to assess virtual leadership in this specific context.

The research method of this thesis is qualitative. The qualitative method offers answers to questions such as how, why, which and focus on the people aspect of data which allows meanings, thoughts, and nuances. A qualitative approach can be beneficial as leadership reflections and experiences are intangible, besides being open for interpretation, hence, such experiences cannot be correctly numerically measured (Maylor & Blackmon 2005). Indeed, the research question demands a profound understanding of how each interviewee perceives what an efficient leadership in a

virtual team is and why, which could not be explained precisely enough through numerical data. In this thesis, a mono method qualitative is used since interviews are the only data collection technique.

### 5.3 Data collection and analysis

As mentioned in the above section, in order to best answer the research questions this research is conducted as an exploratory study with qualitative data that is collected via a single method, interviews. The data are, thus, primary and collected for the sole purpose of this thesis. The sections below discuss how the data was collected and how it was analysed.

Nine interviews in total were conducted from which 5 are subordinates and 4 team leaders. All interviewees worked previously in co-located teams that became virtual due to the COVID-19 pandemic. The participants work in various industries, companies, and countries. Since the interviews include some sensitive information, and in order to assure that the interviewees can speak openly, the interviewees are anonymous. In the table below is presented an overview of the interviewees.

**Table 4**

*Overview of the interviewees*

Pseudonyms	Industry	Area of expertise	Gender	Country
Subordinate 1	Social services	Customer service	Female	Finland
Subordinate 2	Retail	Marketing	Female	Finland
Subordinate 3	Technology	Accounting	Male	Finland
Subordinate 4	Advertising	Communication	Male	France
Subordinate 5	Fashion	Project management	Female	France

Leader 1	Retail	Project management	Female	Finland
Leader 2	Wholesale	Accounting	Male	Finland
Leader 3	Financial services	Sales & Marketing	Male	France
Leader 4	Banking	Finance	Male	France

Beforehand, the interviewees received the preliminary interview questions as well as some information about the thesis project (what the purpose of the thesis is, how the results will be presented). At the beginning of each interview, the thesis project and topic were also addressed, and interviewees were encouraged to ask further questions if needed. The duration of the interviews varied between 30-70 minutes and they were held in English. All of the interviews were recorded with the permission of the participants and notes were taken for each interview. The nine interviews were conducted through internet-mediated tools such as 'Zoom' and 'Microsoft Teams' to ensure social distancing due to the COVID-19 pandemic.

The interviews were conducted following a semi-structured method. This method was chosen since the research questions provide key themes and concepts to be discussed but the conversation should not depend only on a standardized set of questions in order to enable the interviewees to share their true opinions and perceptions. Indeed, as Barriball and While (1994) mentioned, semi-structured interviews are appropriate for the exploration of the perceptions and opinions of participants concerning complex and/or sensitive issues. In addition, this method allows clarification of answers as well as exploring for more information through follow-up questions.

The record interviews were partially transcribed aiming to better summarize each interviewee's main points. Additionally, some quotes were transcribed fully. The analysis method for the interview data was content analysis. The objective of content analysis is to find themes or patterns, within a set of data, that can be further analysed. This method presents an organized and logical analysis of qualitative data that allows



researchers to gain a comprehensive understanding on the topic that is being studied (Saunders et al., 2009). In this study, the first step was to distinguish which parts of the interview relate to which of the sections discussed in chapter 4: the impact on leadership styles, transactional leadership style and transformational leadership style. Thus, the interview data was divided into these three sections according to which it related the most. Once the data was organized corresponding to these sections, the second step was to further analyse it to identify themes.

#### **5.4 Validity, reliability, and ethicalness of the study**

Validity is defined as “the extent to which data collection methods accurately measure what they were intended to measure” (Saunders et al. 2007, p.614). In other words, the validity of the study refers to the extent to which the researcher can access the interviewees' experience and can interpret what the participants are telling the way it was expected. This was taken into consideration by basing the interview questions on the literature review, besides having the same interview structure with each of the participants. In addition, beforehand the participants were given the topic of the interview as well as the interview structure in order to prepare for the discussion. In the beginning of each interview, the topic was also addressed, and interviewees were encouraged to ask further questions if needed in order to hinder misunderstandings.

Reliability refers to the repeatability of the results utilizing the same data collecting techniques, meaning how consistent findings will the chosen techniques create (Saunders et al. 2007). In practice, it can be evaluated by considering if other researchers, if given the same design and data, would report the same conclusions, and if the way in which the data was analysed was transparent. Due to the thesis being conducted by one researcher only, there was no possibility to involve two or more interviewers in order to minimize observer error. Instead, the reliability of the study was developed by transcribing the recorded interviews, adding direct quotations from the interviewees, besides explaining the research process in a very detailed manner so that

the research process is transparent to the reader. In addition, different biases can be considered. Interviewer bias refers to a situation in which “the comments, tone or non-verbal behaviour of the interviewer creates bias in the way that interviewees respond to the questions being asked” (Saunders et al. 2007, p.318). In order to avoid interviewer bias, the researcher acted as neutral as possible when interviewing by keeping a similar tone of voice and non-verbal behaviour, besides maintaining similar wording of questions during all the interviews. In addition, the researcher gave the interviewees freedom to express their point of views without leading them to a certain direction.

Another significant aspect to address concerning the methodology is the ethicalness of the study. This thesis was conducted by focusing on respecting the interviewees and their privacy. All participants were willing to volunteer as interviewees and gave their consent to record and transcribe the interviews. In addition, the interviewees agreed, within the limits of anonymity, on the utilization of their contribution as data for the thesis.

## 6 Findings

This chapter is focused on the results from the interviews. It is structured according to the research questions, i.e. how does the shift between co-located to virtual teams impact the leadership styles used is discussed first and what leadership style is the most efficient in this new situation as well as is this leadership style viewed differently by the leader and subordinate are addressed in second.

### 6.1 The impact of the shift to virtual teams on leadership style

Based on the interviews, two groups can be identified. The first one being the subordinates that have seen a change in the leadership style of their team leader and the leaders that have adapted their leadership style. The second group is the subordinates that did not see an impact on the leadership style of their leader or the leader that did not change their leadership style. According to the interview results, the 4 leaders changed their way of leading their team.

**Table 5**

*Impact of the shift from co-located to virtual teams on leadership style*

Pseudonyms	Impact on leadership style	No impact on leadership style
Subordinate 1	X	
Subordinate 2	X	
Subordinate 3	X	
Subordinate 4		X
Subordinate 5		X
Leader 1	X	

Leader 2	X	
Leader 3	X	
Leader 4	X	

### 6.1.1 Impact on leadership style

Three out of five subordinates have seen an impact in their managers' leadership style after the shift from co-located teams to virtual teams. This impact has been considered as positive. Indeed, the three subordinates highlighted that, according to them, before the crisis their team leader was not communicating enough. After becoming a virtual team, they explained that their team leader communicated more to the team, besides emphasizing informal interactions. Communication being one of the biggest challenges in virtual teams, team leaders tried to tackle it by communicating more than what they did before.

*“Before [the COVID-19 pandemic] my team leader was only focusing on the tasks, on the job itself and not talking enough with the team. Now I feel that my manager has adapted to the new situation, she is more positive and putting more effort on constantly asking people how they are doing, there are more informal interactions. The context definitely changed my manager's way of leading the team.”*

Subordinates 2

*“After the shift to the remote team she [the team leader] talked more, she was more communicating. She also did more personal interaction like asking questions about me like How are you? How was your weekend?”* Subordinates 3

*“I would say that before the crisis my manager was not reactive, he did not put effort in leading the team. He was not communicating enough either. After there*

*was more communication, he also focused on doing more informal interaction with some questions such as How are you today?" Subordinate 1*

In addition to emphasizing communication and informal interactions, subordinates pointed out that their team leader also highlighted team cohesion. To do so, their manager implemented informal video chats such as "coffee meetings" or "apero meeting". Beside increasing the team cohesion, these informal meetings also helped to handle the lack of social interactions.

*"She [the team leader] put more effort on having good team spirit by implementing "coffee meetings" where team members could talk about other things not only work." Subordinate 3*

*"My team manager also created some video meetings such as "apero meeting". It actually created a better team spirit than before. "Subordinate 1*

Furthermore, two subordinates explained that their team leaders became more transparent and started to give more feedback than before the shift to a virtual team.

*"My team leader became very transparent with everything that happened in the company. He also gave me more positive and negative feedback which really helped me." Subordinate 1*

*"I think that in the pandemic context my manager started to do constructive feedback individually and as a team." Subordinate 3*

The 4 leaders interviewed identified a change on their leadership styles with the shift between co-located teams to virtual teams. Their answers go along with the subordinates' one as every leader mentioned that they emphasized more communication. In order to do this, leaders mentioned that they tried to be clearer and more precise while communicating to their team members. One leader also pointed out

that he made sure that the employees received and understood the information correctly, something he was not doing before the shift to a virtual team. Two leaders also added that they did more informal interactions with the team.

*“More communication with the team was one of the keys as a leader to handle this new situation.”* Leader 2

*“Remote work has been a change for everyone, and I realized that my employees also needed support. I think that I put more effort in my communication style as well as interacting more with team members.”* Leader 3

In addition, every leader mentioned that they decided to do more formal meetings as well as informal meetings. Formal meetings are the one to check and monitor the work of the employees. Whereas informal meetings are to compensate for the lack of social interaction as well as maintain a good team spirit.

*“With the team we are doing weekly meetings it allows me to monitor them, to see if everything is going good with their tasks.”* Leader 1

*“As a team one of the biggest challenges was to keep a good team spirit so that people stay motivated especially in these hard times. That’s why I implemented some informal meetings once per week.”* Leader 3

In addition, one leader mentioned that she emphasized more the feedback than before the shift to a virtual team. She explained that before the crisis the employees were naturally going to see her to ask if their work was good or if they could improve it. However, in this new context she pointed out that it is harder for the subordinates to ask as it is more formal. Therefore, she mentioned that the leader needs to take the initiatives in order to guide the subordinates.

*"I feel that I am giving more feedback than before the crisis to my employees. I think it is to guide them [the subordinates] in this new situation."* Leader 1

### **6.1.2 No impact on leadership style**

Contrary to the other interviewees, two subordinates did not observe a change in their manager leadership style. These two subordinates discussed that despite the shift from co-located teams to virtual teams, their team leader did not try to adapt their leadership style. The subordinates pointed out that the swift to virtual teams came with challenges and that team leaders could have tackled them by changing their way of leading the team. According to these two interviewees, the absence of adaptation negatively affected the efficiency of the team. The two subordinates explained that they were expecting more toward their manager during this crisis.

Both of the subordinates discussed that their team leaders should have given them feedback to help them knowing if they are on the right path. They felt that right away they needed to do their work as usual despite a completely new situation for them. One of the interviewees explained that she would have liked to receive clearer information about the tasks or the objectives of the team. She pointed out that without clear instructions and communication the team became lost. The subordinate also added that she was expecting to have more interactions with her team leader and receive more questions related to work and also more personal. such as how is the work going or how is she doing.

*"I believe that my leader should have been more active and supportive with the team. For instance, she should have given more precise instructions and also ask more how the work is going, if everything is good despite the situation."*  
Subordinate 4

These answers go along with the other subordinate's one. Indeed, the other interviewee pointed out that during crisis times, it is important that the leader emphasize communication and transparency. She explained that because of this lack of communication the whole team was lost which is impacting the motivation, satisfaction, and performance of each team member.

*"My manager should have changed her way to lead the team as everyone was lost. There should have been more communication and more transparency. It is a weird period so there is a need for more communication."* Subordinates 5

## **6.2 Transformational leadership style**

This section discusses different characteristics of the transformational leadership style with the aim to understand if these aspects impact the efficiency of a virtual team. This is considered by using subordinates' and leaders' point of view.

### **6.2.1 Ensuring team cohesion**

One important aspect of the transformational leadership style is that transformational leaders ensure team cohesion. Team cohesion has been identified, by leaders and subordinates, as a vital element for team efficiency in a virtual context. Different elements have been pointed out by the participants. The first aspect that has been emphasized is that during crisis time, such as in the COVID-19 outbreak, team cohesion is crucial. The lack of interaction due to the nature of virtuality has been considered as a challenge to keep motivation. Therefore, some participants explained that in order to tackle this challenge and keep team members motivated, the leader needs to ensure a good team spirit.



*“When facing the unknown (such as teleworking), cohesion allows for reassurance and exchange.”* Leader 2

*“Team spirit is even more important during COVID-19 times to keep the team members motivated.”* Leader 1

*“People needs to feel good in the team especially during corona time”* Subordinate 1

*“It is important in this situation which is hard morally. In remote work, there is not really informal interaction like at the traditional office. It is impacting the team. Having a good team spirit can really affect motivation, therefore, the performance of the team.”* Subordinate 4

Another element that has been highlighted is the satisfaction. One leader explained that team cohesion directly impacts the team members' satisfaction, thus, the team efficiency. The interviewee pointed out that if the team members are not satisfied, they only focus on their work and they only do what they have to do. They are putting less importance on the company or the other team members. However, people that are satisfied might do more than only what they have to do. Satisfaction has also been linked to fewer turnover. Turnover being identified has negatively impacting team efficiency by the interviewees.

*“It can also impact turnover which is bad for the team performance as it is not efficient if the team members are changing all the time.”* Leader 1

*“It also keeps them [the team members] in the company as we know that turnover can impact team performance in a bad way.”* Subordinate 2

In addition, some of the subordinates interviewed explained that team cohesion has an indirect impact on the team performance. Indeed, they mentioned that if they need help in their task, they will more easily go talk to their team leader or team members. One interviewee also pointed out that you can learn from your colleagues when there is a

good team spirit. As previous research has shown, knowledge sharing can have a positive impact on team performance.

*“With good spirit team members can also help each other.”* Subordinate 1

*“Team cohesion is important especially when we need help, we know that the other team members can help us.”* Subordinate 5

*“You can learn new things thanks to team cohesion. Colleagues are more willing to share their knowledge.”* Subordinate 3

Although participants pointed out that team cohesion plays a bigger role during crisis times, ensuring it has been considered as one of the hardest things to do for the leaders interviewed. Indeed, leaders highlighted that team cohesion is mainly built through informal interactions. However, in a virtual context non-official interactions are limited. Therefore, leaders explained that they need to strive to keep team cohesion to ensure team efficiency during COVID-19 pandemic.

### **6.2.2 Promoting trust**

Participants have also been asked if trust among the team and to the team leader is important for the effectiveness of a remote team. The answers have been less straightforward than for the other aspect previously mentioned. Indeed, although the trust on the team leader has been seen as directly impacting team efficiency, the trust amongst the team (between team members and leader to subordinates) has not been seen as having a direct impact on team effectiveness. 4 out of 5 subordinates and all the leaders agreed that trust in the team leader is significant for the team efficiency. They argued that with this trust it is easier to accomplish and to relate to the goals established by the leader. Subordinates also discussed that when there is trust in their leaders, they find it simpler to communicate and to work with them which can directly impact the team efficiency.

*“When I am trusting my leader, I feel that I can ask more questions. Instead of wondering during ages about something I can ask it right away. So, for sure it can directly impact team effectiveness as we know that communication is really important”* Subordinate 2

However, most of the participants explained that trust among the team plays a complementary role to other elements such as monitoring or team cohesion. Indeed, one leader argued that team leaders should not only lead through trust, trust should be a complement of monitoring in a virtual environment.

*“Trust is a complement of monitoring in remote working. It should not be the only thing especially that in remote work we cannot see what team members are doing so trust is not enough.”* Leader 2

This goes along with the limits of trust in remote settings that 3 subordinates pointed out. They argued that leaders should not base everything through trust since it might impact their fairness. Therefore, trust should be used in a complementary way of monitoring.

*“Trust is important as in remote settings we cannot see fully what other people are doing. If one person does not work well it can put the team behind, so it is really important to have trust towards other team members and the team leader. But at the same time team leaders still need to monitor to have fairness. They should not only base everything through trust.”* Subordinate 3

In addition, trust has been identified as playing a complementary role in team cohesion by several subordinates. Some mentioned that trust can impact the team cohesion. They also pointed out that without trust, team cohesion does not really exist.

*“If you don’t trust the other team members it is hard to work as a team, there wouldn't be a real team spirit.” Subordinate 5*

*“For me, trust does not directly impact the team performance, but it affects the team cohesion. So indirectly trust impacts the team performance as team cohesion can impact it. “Subordinate 1*

### **6.2.3 Providing bigger autonomy**

Giving bigger autonomy to the team members is an element of the transformational leader. Receiving autonomy has been considered by subordinates as impacting the team effectiveness. Indeed, they pointed out that autonomy can drive to more creativity for team members. It can lead them to think “out of the box” which might impact positively the team performance.

*“When you can do your work freely it can bring creativity. You can do the task multiple ways and just decide yourself what is the best, the most effective.” Subordinate 3*

*“With autonomy employees can work in their own way which can lead to better results at the end.” Subordinate 2*

*“When there is autonomy, there is more flexibility, more creativity and less pressure. All of these can lead to better performance.” Subordinate 4*

Although the subordinates found autonomy positive for the team performance, some pointed out a limit. They mentioned that receiving too much autonomy can be counterproductive since it can lead to confusion for team members. Therefore, two subordinates mentioned that autonomy should be done within a frame.

*“There should be some rules and guidance and at the same time room to do it [the work] your own way.”* Subordinate 3

*“Receiving too much autonomy can be a pitfall. If there is too much autonomy employees are going to be like “lost sheep”. There still need to be a frame through instructions and mentoring.”* Subordinate 2

The leader’s point of view on the effectiveness of autonomy on the virtual team effectiveness differs from the subordinates’ one. The 4 leaders interviewed did not find that autonomy can positively impact team performance. For them, it is not an important aspect that leaders need to particularly focus on in order to have a good team effectiveness. Two leaders added that in remote work, per se, there is more autonomy, thus, team members need to be able to cope with it. For leaders, autonomy has been seen as something that they have to handle with the context but not something that they need to give more. They also explained that for some individuals it can be more difficult to deal with this new autonomy. Therefore, team leaders still need to give a frame to guide team members. This coincides with the subordinate's requirement for a frame in this new environment seen above.

#### **6.2.4 Assuring coaching and training**

Coaching and training has been considered as significant for the virtual team effectiveness by both leaders and subordinates. Some subordinates pointed out that remote work creates new challenges such as with technology that can negatively impact team performance. Indeed, although technology offers a lot of benefits, its use also creates complexity especially where different types of technologies are utilized. Subordinates explained that coaching and training can tackle this challenge, thus, maintaining a good team effectiveness. In addition, one follower explained that coaching and training can positively impact subordinates’ personal development, thus, can provide them with higher satisfaction.

*“It is very important in virtual settings as in this context we use a lot of technology and there are not so many people familiar with that. That’s why coaching and training is good as you can learn how to improve and that will definitely improve team performance.”* Subordinate 2

*“Coaching or training is harder to do in remote work. However, it should not be forgotten since employees might need it even more in this new environment.”*  
Subordinate 4

Leaders agreed with the subordinates that coaching and training can help dealing with the new challenges created by the shift to co-located teams to virtual teams. Indeed, some also mentioned the challenge linked to the use of technology.

*“For colleagues who have never worked remotely, it can be harder to do their tasks, or to deal with the technology. If they are left aside it can really impact the performance of the team. That’s why coaching them and teaching them new things are important to do as a team leader.”* Leader 2

One of the leaders added that keeping the same way of working as before the shift to remote work can directly impact the team efficiency. The interviewee argued that in order to help the team members to adapt, coaching and training sessions are one of the best tools.

*“Keeping the same working habits as before the crisis can lead to a decrease in the team performance. That’s why coaching and training sessions are mandatory in this new context in order to give some of the best practices to work efficiently in a 100% remote work.”* Leader 3

Although coaching and training have been identified as significant for the virtual team effectiveness, subordinates explained that leaders need to ensure it but do not need to carry it out by themselves. Indeed, several subordinates argued that the role of the

leader is to ensure that team members have coaching or training sessions, but the leader does not need to be always the one to do it. It can be some other team members which can positively impact the team cohesion as one subordinate mentioned.

*“For me it does not need to be only a manager role to give coaching or teaching some other team members can have it also as long as the manager makes sure that the needed teaching or coaching is available.”* Subordinate 1

*“The leader needs to ensure it [coaching and training] but does not need to do it personally.”* Subordinate 5

*“Coaching can be done though 1 or 1 meeting or informal team meeting which can be good for team spirit and better interaction.”* Subordinate 2

### **6.3 Transactional leadership style**

In this section different elements of the transactional style are discussed with the goal to understand if these aspects impact the efficiency of a virtual team. As in the previous section, this is considered by using subordinates' and leaders' point of view.

#### **6.3.1 Providing recognition and reward**

Recognition and rewards elements were identified, by all interviewee's leaders and subordinates, as really important for the team efficiency in a remote context. Some interviewees explained that it is important as it is influencing the team motivation and satisfaction which are the factors impacting team performance.

*“Receiving recognition and rewards is very important in virtual settings. Giving real recognition or rewards can improve team satisfaction, motivation, and employee's well-being so it is good for the overall team performance as these factors have an*

*impact on it. If the manager doesn't recognize the work, as an employee, I will feel unsatisfied and feel that I have been used which will affect my work in the team."*

Subordinate 2

In addition, the recognition and rewards aspects can also compensate for the lack of informal interactions due to the virtual context. Indeed, as one interviewee explained, at the office when the employee did a good job, the manager can give recognition to the employee in an informal interaction such as at the coffee machine. However, in a virtual context everything needs to be explicit and more official since there is not informal interaction per se. Some interviewees also emphasized that in the uncertainty caused by the COVID-19 outbreak, it is even more important to receive recognition from the team leader to stay motivated.

*"In virtual settings it is even more important as you don't really have informal interactions so receiving official recognition or rewards show that the managers still care about us."* Subordinate 3

Furthermore, some interviewees stated that the recognition and rewards aspects are important as it is influencing the future teamwork. This means that receiving recognition and rewards does not only give motivation in the instantaneous moment but also in the long run for the team members.

*"It is extremely important because of the continuous work afterwards. With rewards and recognition, it helps to move forwards with the next task. We know that we did a good job and that we should continue. It gives motivation and satisfaction as individuals but also as a team."* Subordinate 1

*"Recognition and rewards give other ways to support the team. It is guiding the team in order to continue their good work in the future."* Leader 4



### 6.3.2 Establishing clear expectations

Establishing clear expectations such as objectives and goals for the team has been identified as an important element for the interviewees. The team leaders explained that during remote work subordinates tend to lose their bearings especially as the shift between collocated to virtual team has been unexpected and happened rapidly. Thus, they emphasized that subordinates need to have a frame to guide them during this process. Implementing clear communication concerning the objectives of the team is an important tool for the team performance since it is acting like a framework. A leader stated that when there are clear goals, it is easier to follow the process, thus, to achieve these goals.

*"It is like a frame guiding the team, employees are less lost despite the context."*

*Leader 1*

*"It is a frame for the company to drive performance of the organization and people's performance."* Leader 3

*"This is important because the team needs to have a common thread to be supported in this new way of working; by clearly communicating expectations, it avoids the team to be lost."* Leader 4

In addition, one team leader mentioned that if the goals are not clear, it is harder to monitor the work performance from a leader and subordinate point of view. This leader noted that giving clear goals and objectives has an impact on the satisfaction of the subordinates. Indeed, as explained previously, establishing clear objectives plays the role of a framework which avoids the team to be lost. Thus, if the team understands the goals, it will help it to achieve them more easily. Hence, it will impact the team's satisfaction. Since satisfaction is a factor of team performance, if the team feels satisfied, it will affect its work performance.

Overall, the five subordinates agreed with the leader's point of view. The followers explained that having clear expectations is important as it is guiding them in their work. In addition, one of the subordinates interviewed highlighted that establishing clear objectives is also important in order to not waste time and have misunderstandings. Indeed, previous research has identified team communication as one of the major challenges related with virtuality. This challenge can directly impact the team performance and productivity, thus, implementing explicit goals for the team can tackle it.

*"It can affect the team performance as it is not efficient to ask again online since it can take time and sometimes you will never receive an answer. So being clear at the beginning avoids wasting time for employees to ask again."* Subordinate 2

### **6.3.3 Providing feedback**

Feedback has been described as crucial for the team performance by the interviewees especially the subordinates. Indeed, subordinates explained that feedback can positively impact productivity since it is helping to take a step back, to get things into perspective as sometimes as an employee it is hard to notice what is wrong. They also highlighted that the feedback should be constructive. It should explain what could be improved if needed. The interviewees also noted that feedback should not only be done when something is wrong, it can also be positive.

*"It is really important to receive feedback, but it should not only be saying "it is good or bad". It should be constructive like how we can improve. As an employee it is hard to measure how you perform so constructive feedback really helps to improve our performance."* Subordinate 2

*“Feedback is extremely important, but it has to be constructive. It helps to not make the mistake twice so it can clearly improve the performance of the team. It also allows you to take a step back and it can give direction.”* Subordinate 4

Concerning the leaders, they overall agree with the subordinates’ point of view. One leader defined feedback as expressing to the subordinates what is working and what should be improved. Feedback is considered important for leaders as it gives the right direction to follow for the employees. If the team does not go in the right way, feedback can guide the subordinates. It can also be used as support for the employees when they are in the right direction which might increase their motivation. Hence, feedback can directly impact the team performance.

*“You should give real time feedback all the time, not only when there are bad results. Feedback needs to be given quickly, so you can support or fix what the subordinates are doing. By doing so, it can clearly impact the team performance. You can guide the employees to reach the goals, tell them if they are in the right direction or not.”* Leader 1

*“Without feedback, people don’t know where they are and if their contribution is going in the right way.”* Leader 4

In addition, one of the leaders interviewed explained that in the remote context feedback becomes of greater importance even though it is more complex to give it. Indeed, it is easier to give feedback quickly while working in a co-located team compared to a virtual team. In a face-to-face team the feedback can be made during informal interactions, for instance around the coffee machine. The interviewee mentioned that it is also easier for the subordinates to ask their managers what they think about their work during these informal interactions. However, the leader underlined that subordinates need guidance through feedback especially in this new environment. Thus, the leader should put more effort in giving feedback to the subordinates despite the situation to keep a good team efficiency.

### 6.3.4 Monitoring of team members

Interviewees were also asked if monitoring is important for the effectiveness of a remote team. Overall, the interviewees agreed to say that it is significant for the team efficiency. Three subordinates explained that monitoring is playing a bigger role in virtual settings. Indeed, in a team it is really important that each member is doing his job in order to ensure productivity. However, subordinates argued that, in a virtual environment, leaders are not able to see as easily as in co-located teams what the subordinates are doing. This can lead to some team members working less than others which can negatively impact the team productivity. Overall monitoring can bring fairness which has an impact on the employee's motivation and team cohesion. One subordinate also pointed out that if someone needs help to achieve the objectives on time but is struggling with it. With good monitoring the leader can reallocate the tasks in order to achieve the team goals.

*“It can help the managers to stay fair as he/she can divide the tasks fairly to everyone and really see what team members are doing. For instance, if someone is behind in his/her work, the manager can try to understand why and distribute the tasks to ensure that the objectives will be reached, it can improve team effectiveness.”* Subordinate 3

Two subordinates also highlighted that monitoring can be helpful for feedback and coaching.

*“It is important because managers should know what the team members are doing to ensure constructive feedback or coaching if needed.”* Subordinate 2

*“Monitoring can help to ensure coaching when subordinates need it.”* Subordinate

In addition, 4 out of 5 subordinates noted that monitoring has some limits. They explained that the team leader should not be over present and too controlling. In this case, they will feel too much pressure that can become counterproductive. This might impact their satisfaction and motivation which are factors of the team effectiveness. To avoid monitoring to be counterproductive by giving pressure to the subordinates, one leader mentioned the importance of being transparent to the team about the process.

For all the leaders interviewed monitoring has been considered significant for the team performance in a virtual environment. Some leaders highlighted that the monitoring should not only be done for the team but also individually to determine the work contribution of each team member. They also pointed out that it can affect the team efficiency since if one team member did not do the work correctly or if there were some misunderstandings in the team the leader can right away adjust it.

*“It is important to monitor to ensure that team members are doing what they are supposed to be doing especially in remote settings.”* Leader 2

*“With monitoring I can check directly in the system what my employees are doing and if the things that need to be done are done. If it is not, I can right away ask the team why and fix it with them. So, it is really important for the team performance.”*  
Leader 3

### **6.3.5 Assigning clear roles and responsibilities**

Eight out of nine interviewees explained that having clear roles is significant for the virtual team efficiency. Several participants pointed out that, in virtual settings, it is more important to establish clear roles for the team members compared to co-located teams. They argued that it can be more complex in remote work to see what work has already been done or needs to be done due to the lack of communication. Sometimes,

it can create confusion within the team. The work can be made twice or be forgotten which can negatively impact the team performance, thus, the team effectiveness.

*“It is essential so that the team won’t do the same job twice, double work unnecessary”* Subordinate 1

*“It is important so any work that needs to be done will not be put aside or be forgotten. So, every subordinate knows their own role so that they can focus on this and that they are not two people doing the same work which will not be efficient at all. Sometimes people can also start a task without knowing that it was already done because of the lack of communication in remote working.”* Leader 1

Although the participants explained that establishing clear roles is important, they also mentioned that the job position, per se, should be clear. They added that if the position is not clear, it is not only the role of the leader to clarify it but also the role of subordinates to ask for clarifications.

Assigning clear responsibilities has been considered, by all the interviewees, as an important element for the team performance in a virtual environment. Some leaders and subordinates pointed out that assigning responsibility to the team members has a high impact on their motivation. One of the leaders also remarked that this motivation could tackle the lack of interaction due to the nature of virtual teams, thus, be beneficial for the team performance.

*“It is important to have responsibility as it can improve the motivation of the employees, thus, improve team effectiveness”* Subordinate 2

*“Assigning responsibility to the team members helps motivate them and prevents a slowdown in activity due to the lack of interaction.”* Leader 4

## 6.4 Summary

In order to best summarize the sections 6.2 and 6.3, two tables were created. Table 5 discusses the benefits and limits of transformational leadership style on team efficiency, whereas table 6 examines the benefits and limits of transactional leadership style. If the cell is blank it means that none of the interviewees mentioned something about this element.

**Table 6**

*Benefits and limits of transformational leadership style on team efficiency*

Elements	Benefits on team efficiency according to:		Limits on team efficiency according to:	
	Leaders	Subordinates	Leaders	Subordinates
Ensuring team cohesion	-Keep motivation -Tackle lack of social interaction -More satisfaction -Less turnover	-Keep motivation -Tackle lack of social interaction -More satisfaction -Less turnover -Knowledge sharing		
Promoting trust	-Complementary role in monitoring -Easier for subordinates to relate on the objectives	-Complementary role in monitoring and team cohesion -Better communication	-Trust is not enough, should be a complement to monitoring	-Unfairness
Providing bigger autonomy		-More creativity, thinking "out of the box" -Team performance	-Subordinates need a frame	- Counterproductive if receiving too much

				-Still need a frame
Assuring coaching and training	-Tackle challenges such as with technology -Help to adapt to virtual teams	-Tackle challenges such as with technology -Personal development can provide satisfaction		

**Table 7**

*Benefits and limits of transactional leadership style on team efficiency*

Elements	Benefits on team efficiency according to:		Limits on team efficiency according to:	
	Leaders	Subordinates	Leaders	Subordinates
Providing recognition and reward	-Support the team for their future work -Guide the team -Give team satisfaction	-Give team motivation in short and long-run -Give team satisfaction -Compensate lack of social interactions -Guide the team		
Establishing clear expectations	-Guide the team -Easier to follow the process -Impact team satisfaction	-Guide the team -Avoid misunderstanding and wasting time by asking again -Productivity		
Providing	-Give the right	-Help to take a step		



feedback	direction to the subordinates -Impact motivation	back on the work -Help for the improvement -Productivity		
Monitoring of team members	-Impact team performance -Real time adjusting if encounter problems	-Fairness which impact positively team motivation and cohesion -Helpful for feedback and coaching		- Counterproductive if the leader is too controlling
Assigning clear roles and responsibilities	-Avoid confusion in the team -Impact on motivation	-Avoid confusion in the team -Impact on team performance -Impact on motivation		

## **7 Discussion**

This thesis studies how to effectively lead previously co-located teams that became virtual during crisis times. More specifically, it looks at the below two research questions:

- 1) How does the shift between co-located to virtual teams impact the leadership styles used?
- 2) Which leadership style is the most efficient in this new situation? Is this leadership style viewed differently by the manager and subordinate?

This chapter discusses these two research questions based on the findings while also reflecting on the existing literature.

### **7.1 The impact of the shift to virtual teams on leadership style**

The findings of the study are in line with the existing literature on the topic (see e.g. Hoch & Kozlowski, 2014; Malhotra et al., 2007) as they indicate that the shift between co-located to virtual teams impact the leadership style used. Indeed, three out of five subordinates and all four leaders have seen an impact in the leadership style used after the shift from co-located teams to virtual teams. Subordinates explained that their leaders emphasized communication, informal interactions, team cohesion, feedback, and transparency. Whereas the leaders discussed that they highlighted communication, informal interactions, monitoring (through formal meetings), team spirit (through informal meetings) and feedback. All these aspects can be associated with virtual teams' characteristics and challenges such as communication challenges or lack of social interactions. Team leaders tried to tackle these challenges by adapting their leadership style accordingly. This connects to the leadership theory. According to Hoch and Kozlowski (2014), the exercise of virtual leadership has been seen as different compared to the traditional leadership practiced face-to-face. Indeed, the virtual teams'

characteristics create new challenges. Virtual leaders have to adapt to the requirements of virtual settings and find new tools to manage these challenges. Thus, in order to tackle these challenges, team leaders are adapting their leadership style by emphasizing new elements compared to when they were in co-located teams. (Malhotra et al., 2007)

In addition, Zigurs (2003), argued that behaviour in co-located teams cannot be simply transferred in a virtual context and expect to be successful. This goes along with the findings since the two subordinates that have not seen any impact on their manager's leadership styles have perceived it as negatively affecting the team efficiency. As mentioned above, the swift to virtual teams come with challenges and if team leaders do not try to tackle them by changing their way of leading, it can be detrimental to the team efficiency.

## **7.2 The most efficient leadership style**

This study examined which leadership style is the most effective to lead co-located teams that became virtual teams. The literature review identified a combination of transformational and transactional leadership as being the most efficient during these special times. Indeed, previous research discusses that leaders can be both transformational and transactional and suggests that the most effective leaders use both leadership styles (O'Shea et al., 2009; Avolio et al., 1999). In other words, these studies discuss that the elements composing transformational leadership style such as trust, team cohesion, autonomy or coaching can be seen as complementary to the elements of transactional leadership style. The findings are aligned with the literature review. Indeed, participants highlighted that team cohesion is crucial for team effectiveness during crises such as the COVID-19 pandemic. Similarly, ensuring coaching and training has been considered as significant to adapt to this new virtual environment. However, transformational style might not be enough to maintain team efficiency after the swift to virtual teams. This new environment can generate confusion, thus, interviewees called for more guidance and framework, skills that transactional leaders

excel at. Indeed, transactional leaders are task cohesion oriented meaning that they focus on communicating expectations, providing feedback, monitoring and establishing clear roles for each team member. These elements provide a clear framework as well as guidance for the team.

In addition, in previous research, transactional leadership has been associated with higher output performance and productivity, while transformational leadership is associated with greater satisfaction and team cohesiveness (Hoyt & Blascovich, 2003). As team effectiveness can be defined in terms of performance and satisfaction, combining transformational leadership style with transactional leadership style can provide higher team effectiveness in a virtual environment (Powell et al., 2004b). The findings of this study are quite consistent with the literature review. Indeed, the interviewees linked some elements of the transformational leadership style such as team cohesion and assuring coaching and training to higher satisfaction and motivation. Participants also associated transactional leadership style with greater performance and productivity such as with establishing clear expectations, providing feedback, monitoring of team members, and assigning clear roles and responsibilities.

Although the literature review distinguishes transformational and transactional leadership styles through satisfaction and performance, the findings are less distinct. Indeed, the theory did not associate transactional leadership style with higher satisfaction, however, the participants did. They pointed out that providing recognition and rewards as well as establishing clear expectations can positively impact team members' satisfaction. Similarly, interviewees discussed that providing autonomy and team cohesion, elements related to transformational style, can also provide a greater team performance. Although the findings are less distinct, the results remain the same. A combination of both leadership styles can be positive since team effectiveness can be defined in terms of satisfaction and performance.

Furthermore, the findings of this study are showing that leaders and followers overall agree on the leadership style that should be used in this new context as well as the elements impacting team effectiveness. Indeed, for most of the features, both groups agreed that they are beneficial for the team effectiveness. However, one element shows some discrepancies. Providing bigger autonomy has been seen as beneficial for the team efficiency according to subordinates. However, leaders did not point out any benefits of giving bigger autonomy to followers. Despite this disagreement, the same limits of providing bigger autonomy has been identified from leaders and followers.

As the COVID-19 pandemic is global, it is also interesting to take these findings in a more international context and to analyse if the results differ according to the leaders' or subordinates' country. Two out of two French subordinates indicated that they did not see any impact on their manager leadership during the swift to virtual teams whereas the three Finnish subordinates pointed out an impact. This difference can be linked to the fact that the two Finnish leaders already worked remotely before, therefore, understood, and learned the need of adapting their leadership styles. The French leaders never worked in a virtual team before.

Concerning the leadership style, per se, Finnish leaders tend to emphasize more transformational style by highlighting the importance of team cohesion and assuring coaching and training. Whereas French leaders are more task-oriented and tend to lead more towards transactional style as they emphasised monitoring and providing recognition and rewards as well as establishing clear expectations. Cultural differences can explain this contrast. Indeed, according to Hofstede Insights (2021), the French culture is characterized by a high-Power Distance and Masculinity. This leads to highly hierarchical and bureaucratic organizational structures. The decision-making process is very centralized which can often drive to inflexibility and lower possibilities for subordinates to make decisions on their own. Therefore, leaders tend to have a transactional leadership style as this style gives more guidance and less autonomy compared to transformational style.

On the contrary, Finnish culture shows extremely low Power Distances and very low Masculinity scores (Hofstede Insights, 2021). This results in a management style that is very decentralized and democratic. This culture can be reflected in the transformational leadership as this style emphasizes teamwork and giving autonomy to the subordinates meaning that the power is not only top-down, but it is more spread within the team. Although there are some differences in the leadership style used between cultures with the leaders, it is less distinct with the subordinates. Indeed, neither Finnish nor French subordinates highlighted one style more than the other. Both groups of subordinates agreed that elements of transformational and transactional leadership style are important for virtual teams.

## **8 Conclusions**

The final chapter of the thesis discusses the theoretical contributions and managerial implications of the study. Finally, as a concluding remark the limitations of the study are discussed and suggestions for future research presented.

### **8.1 Theoretical contributions**

This study contributes to filling the gap on efficient leadership for previously co-located teams that become virtual during crisis times. The findings of the thesis provide support to the existing literature that adapting leadership style is required to maintain team efficiency. The underlying reasons that influence this relationship are also examined. The findings indicate that virtual teams' characteristics as well as their challenges are the main reasons that required an adaptation of the leadership style. Furthermore, this study contributes to the existing research on what is the most efficient leadership style for virtual teams. This study discusses that leaders can be both transformational and transactional and suggests that the most effective leaders use both leadership styles. This supports the argument already established in the existing literature. Moreover, the thesis presents similarities and differences in the leaders' and followers' perception of what is the most efficient leadership behavioural style in this new context.

### **8.2 Managerial implications**

The study suggests that leadership can positively impact virtual team efficiency, thus it is a relevant topic to consider regarding how to maintain team efficiency when co-located teams become virtual during times of crisis. Leadership can also provide team members with a lower level of anxiety, increased motivation, and bring a sense of belonging. However, leading in a virtual environment has been pointed out as difficult by leaders. This can indicate that organizations should educate their leaders in order to

tackle the challenges linked to virtual leadership since it might not be the last time they engage in virtual teams.

In addition, the thesis suggests that adapting leadership style is a requirement while shifting from co-located to virtual teams. Since it is not possible yet to tell when the COVID-19 pandemic will be over and the fact that additional crises can arise just as suddenly, this study could help managers to know why and how to adapt their leadership style in order to keep an effective team.

Furthermore, this study discusses the most efficient leadership style to be used during this unprecedented time. Instead of using solely transformational or transactional leadership style, a mix of both seems to be the most effective. Managers can benefit from this insight to maintain or even improve the efficiency of co-located teams that became virtual due to crisis.

### **8.3 Limitations and future research**

As in research in general, there are certain limitations to the study. Although certain definitions to the key concepts of the research were provided, it is unlikely that the perceptions of these definitions were the same for every participant. For instance, the perception of team efficiency in terms of satisfaction and performance might differ according to the interviewees. Second, considering the length and time limit of this research, some related topics and theories had to be excluded from the scope of the study. Thus, the study provides limited insight on virtual leadership. Third, as mentioned earlier in the methodology, the data consists of nine interviews, which represent only a narrow overview of the topic. The participants were chosen from diverse industries and they hold various positions, but the interviewees are only from two countries, France, and Finland, and belong to the personal network of the researcher. Thus, the generalisability of the findings is very limited.



The limitations, however, provide some opportunities for further research. This study is considering only two European countries. Therefore, it would be interesting to study what impact various cultural orientations would have on these results. Conducting a similar study within a single company while interviewing people in similar positions would also be interesting, as that would allow a closer inspection on the impact of personal characteristics. In addition, when the crisis is over, and teams can return to business as usual, it would be interesting to explore if managers are changing their leadership style back to what it was before the crisis or if some advantages were identified by adapting their leadership style for virtual teams. This study examines the efficiency of a combination of transformational and transactional leadership style for co-located teams that became virtual during crisis times. However, there are other leadership styles such as laissez-faire, democratic, or supportive. Thus, it could be interesting to further study these leadership styles in the context of the COVID-19 crisis.

Another aspect that emerged during the interviews is the well-being of employees. During crisis times such as with the COVID-19 pandemic, employees are more likely to encounter stress due to the switch to virtual teams as well as with the increase of uncertainty. Some interviewees pointed out that leadership can reduce this stress and improve their overall well-being. However, the concept of stress, well-being, and leadership for virtual teams during times of crisis has yet not been explored. Researchers already agreed that stress can negatively affect the team efficiency whereas well-being can improve it positively. Thus, it could be interesting to study the effect of leadership on the stress and well-being for co-located teams that become virtual during times of crisis.

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## Appendices

### Appendix 1. Interview guide for Supervisor

- Are you ok with the interview being recorded?
- What is your position?
- Do you have any previous experience with virtual teams?
- What types of challenges have you experienced during remote working?
- What type of technology do you use to interact with other team members?
- How did you manage your team before working remotely? On what aspects you were focusing the most in order to have effective teamwork? How is it now, did it change? Are you focusing on different elements?
- According to you, what are the most dangerous pitfalls for a virtual team leader/manager and what are the common mistakes to avoid?
- According to you, what are the things that a virtual team manager/ leader needs to do differently when managing virtual teams compared to face-to-face teams?

#### **Transactional style:**

- To what extent do you think that it is important, for the team performance, to give recognition or rewards to subordinates when they meet their goals in a virtual setting? And why?
- To what extent do you think that it is important, to clearly communicate expectations (objectives, goals) to team members in order to ensure team effectiveness? And why?
- To what extent do you think that it is important, for the team performance, to give feedback to subordinates while working remotely? And why?
- To what extent do you think that it is important to monitor what team members are doing in order to ensure team effectiveness? And why?
- To what extent do you think that it is important to give clear roles and responsibilities in order to have effective virtual teamwork? And why?

**Transformational style:**

- To what extent do you think that it is important to keep a team cohesion/spirit despite the situation in order to ensure team effectiveness? And why?
- To what extent do you think that it is important to maintain a high level of trust between team members in order to ensure team performance? And why?
- To what extent do you think that it is important, for the team performance, to give bigger autonomy to your subordinates while working remotely? And why?
- According to you, to what extent is it important for the team performance, to coach and teach subordinates in a virtual setting? And why?

**Appendix 2. Interview guide for Subordinate**

- Are you ok with the interview being recorded?
- What is your position?
- Do you have any previous experience with virtual teams?
- What types of challenges have you experienced during remote working?
- What type of technology do you use to interact with other team members?
- How was the way your superior manages his/her team before working remotely? How is it now, did it change?
- Do you think that your superior could have changed his way of managing his/her team differently? According to you, on what aspects your superior should focus the most in order to have effective virtual teamwork?
- According to you, what are the most dangerous pitfalls for a virtual team leader and what are the common mistakes to avoid?
- According to you, what are the things that a virtual team manager/ leader needs to do differently when managing virtual teams compared to face-to-face teams?

**Transactional style:**

- To what extent do you think that it is important, for the team performance, to receive recognition or rewards from your manager when you meet the goals in a virtual setting?

And why?

- To what extent do you think that it is important that your manager clearly communicate his/her expectations (objectives, goals) to the team members in order to ensure team effectiveness? And why?

- To what extent do you think that it is important, for the team performance, to receive feedback from your manager while working remotely? And why?

- To what extent do you think that it is important that your manager monitor what the team members are doing in order to ensure team effectiveness? And why?

- To what extent do you think that it is important to receive clear roles and responsibilities from your manager in order to have effective virtual teamwork? And why?

**Transformational style:**

- To what extent is it important that your manager ensure a team cohesion/spirit despite the situation in order to ensure team effectiveness? And why?

- To what extent do you think it is important that your manager ensure a high level of trust between team members in order to ensure team performance? And why?

- To what extent do you think it is important, for the team performance, to receive bigger autonomy from your manager while working remotely? And why?

- According to you, to what extent is it important for the team performance, to receive coaching and training from your manager in a virtual setting? And why?