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Master Thesis

Virtual leadership: Moving teams online during the covid-19 crisis



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Abstract

Globalization and technological developments have made it possible to engage in virtual work modes. Globalization also enabled an enormous spread of the ongoing pandemic of covid-19. A situation that forced previously co-located teams to become virtual teams. This required an adaption for leaders to lead in an environment that differs vastly from traditional ones.

We conducted a multiple case study with an abductive approach and qualitative method in which 10 semi-structured interviews were held with practitioners across 3 business cases that were experiencing a transition into a virtual work mode.

The findings suggest that the work relations between leaders and followers change in several ways when previously co-located teams become virtual teams. This entails new challenges and a shift in the use of leadership styles as well as follower behavior.

Keywords

Covid-19, leader-follower work relations, leadership, virtual leadership, virtual teams

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1. INTRODUCTION

1.1 Background

“It has been like a tsunami for us, we are not used to be working like this, and our business has changed a lot. It has been a direct change that we only have reacted on, there has been no time to act and think one step ahead. From the beginning we have only reacted on how to proceed, but now is the time to act” – ‘Bianca’ 24/4-2020.

According to OECD is covid-19 the biggest threat to the economy in this century. Besides causing loss of life, the pandemic has also brought an economic crisis that will impact societies for years ahead. The pandemic has shown how ill-equipped nations’ healthcare systems are to handle major crises with its lack of testing and intensive-care beds; inadequate workforce; inability to provide the appropriate equipment (Gurría, 2020). Furthermore, as many as 800.000 Swedish jobs were assumed to be threatened already March 23rd as some industries are facing a huge decrease in demand (Stockholms Handelskammare, 2020). The repercussions of the pandemic will be unforgiving on the Swedish economy, to what extent is too soon to assess but the recession we now are facing will be deep and troublesome. Mass unemployment is a threat and the GDP is forecasted to decrease with 6 percent (Konjunkturinstitutet, 2020). The extraordinary circumstances that the virus outbreak brings upon us show how vulnerable our societies are.

Additionally, curfews are being introduced around the world (Kotsambouikidis, 2020; SVT, 2020). The Swedish government has yet not demanded its citizens to work from home or introduced any curfews, however, its public health agency declared that if having the possibility, people should work from home (Eriksson and Falkirk, 2020). Nevertheless, the virus causes drastic actions to be taken. For instance, due to the covid-19 crisis are all hospitals in the Stockholm region using military decision-making system acquired from NATO (Rösthund and Gustafsson, 2020). As location-bound organizations currently are forced to change their ways of leading (e.g., hospitals) or face a massive decline in demand (e.g., hotels and airlines), some organizations may have additional options to maneuver the crisis.

Globalization and technological developments are forces that have brought us new work modes and the possibility to engage in virtual teams (Cameron and Green, 2020). A virtual team (VT henceforth) is defined as a group of co-workers that are dispersed and that together uses

different computer-mediated tools or other technological instruments to accomplish an organizational task. These teams rarely or never meet each other face-to-face (Townsend et al., 1998). Thereby are organizations in some cases allowed to move previously co-located teams online. This indicates that a new working environment will become a new reality for many if doing this kind of transition which arguably can have an impact on leader-follower work relations.

Leadership is a very broad topic and more leadership styles are appearing, some of the leadership views are; “*task-oriented, relations-oriented, laissez-faire, charismatic, transformational, transactional, servant, authentic, practice-based, relational, emotional, distributed, shared, strategic, administrative, complex, coaching, symbolic, visionary, etc.*” (Alvesson et al., 2017, p.5). Technological developments as an external force are then something that makes the list become even longer. Leaders are now allowed to use communication systems and work digitally, thus, ‘distant leadership’ has appeared, as the term ‘Leading by Skype’. Managers are here expected to lead with the help of systems which has created dilemmas for those who understand leadership as a social process. While others see it as a more effective way since it makes leadership work better, as people meet less often (Alvesson et al., 2017). Those who see it as more effective should possibly not be associated with leaders who practice leadership, it is more likely that they are performing management. Leadership is about targeting feelings where leaders provide direction by emotional support. Whereas management takes direction and control (Alvesson et al., 2017). Leadership can be associated with, for instance, motivation and inspiration which can be equivalent to supportive behaviors. Whereas management is associated with more directive behavior such as controlling and planning (Northouse, 2013). However, we are interested in leadership within this research, and indications are that new leadership styles come with additional requirements, for instance, to make collaboration function within the new virtual modes of working (Dulebohn and Hoch, 2017).

Organizations of today are more complex and dynamic than ever, which implies that there is an increased demand for adaptivity and flexibility (Bell and Kozlowski, 2002). The world is rapidly changing, and many people have gone from working in the same building to now interact with the use of technology. People can work from different places and reach one another with the help of all that is now available. Hence, technology makes it possible to work remotely and engage in VTs.

1.2 Problem discussion

VT leaders have the same roles as co-located leaders as they must empower and motivate VT members to achieve set goals, however, this in a virtual environment in which communication is more limited than in traditional teams (Mehtab et al., 2017). Virtual leaders lead in a much freer environment in which it can be more difficult to follow as it can be to motivate employees and to motivate in accordance with the organization's purpose is paramount (Kuscu and Arslan, 2016). Therefore, VTs call for additional skills as behavior in co-located teams cannot be transferred into a virtual setting and assumed to be successful (Zigurs, 2003).

It has shown that the frequency of communication is more important for VTs than for other kinds of teams. VTs often lack the more traditional way of communicating and sharing information face-to-face, they might also lack the tone of voice and other nonverbal cues (Schmidt, 2014). The environment for leadership in VT is characterized by vague communication and self-leadership among members is a necessity. For leaders to successfully manage VTs they have to facilitate, communicate more frequently, and raise the visibility of VT members' activities (Zigurs, 2003).

We have recently entered the worldwide crisis of covid-19. Virtual leadership is, therefore, an important and relevant topic to consider, and this especially now when an unpredictable situation has occurred. Leadership can furthermore be understood as a process involving leaders and followers, which is socially constructed (Uhl-Bien, 2006). However, when leaders are not able to be physically present, they face challenges to know when employees need social interactions or when they are getting slow (Malhotra et al., 2007). Taken together, people will due to the crisis unavoidably have to work remotely more frequently than usual in order to reduce the spread of the virus. Organizations that typically conduct their businesses at the workplace might soon choose voluntary, or be forced, to engage in VTs. This calls for the development of new skills to be able to lead their workforces virtually, something that these organizations might not have tackled before. For instance, how to maintain relationships in a virtual environment (Pauleen and Yoong, 2001).

Even though the ways we collaborate are rapidly changing, a large portion of the research on teams is still concerned with the classical team and its more clearly defined boundaries of leadership, membership, and purposes, compared to VTs (Wageman et al., 2012). What has been explored by several researchers is the importance of trust within VTs. The success of VTs is dependent on trust (Brahm and Kunze, 2012). *“Indeed, trust is the glue that holds virtual*

teams together” (Ford et al., 2017, p.34). Many researchers have focused on teams that already work virtually, thus not about teams that have been forced or decided to do so because of an external, unpredictable situation. The studies have for example been conducted to understand how physical distance affects communication and leadership performance (e.g. Neufeld et al., 2010), but these studies have been conducted in organizations that already working within these settings. Previous research has also been concerned with how to communicate within VTs (e.g., Marlow et al., 2017), how to increase VT’s effectiveness (e.g., Dulebohn and Hoch, 2017), what challenges VTs face (e.g., Malhotra et al., 2007; Dulebohn and Hoch, 2017) and VT’s characteristics (e.g., Bell and Kozlowski, 2002). Additionally, the focus has been on how to start VTs consisting of members previously unknown to each other (Duarte and Snyder, 2006). However, there have to our knowledge not yet been any research of how leader-follower work relations are affected when previously co-located teams go online due to a crisis. Our assumptions are that leaders and followers always have some kind of relationship and that this will in one way or another change if the normal way of working gets disrupted, as it does when co-located teams become VTs.

Hence, leadership as a relational process between leaders and followers, in which they co-produce leadership has not yet, been focused on within a context where previously co-located teams have decided, or been forced, to move online during a crisis. This is something that still needs to be addressed. Here we identified a research gap concerning how organizational members, that normally do not engage in virtual work modes, handle the originated situation of engaging in VTs due to a crisis. This on a temporary basis since they most likely will return to their regular work modes after the crisis. We find this interesting since this research would add to the body of knowledge with insights regarding how to handle the current situation and what additional demands leaders and followers face in times of crisis when transitioning into a virtual environment. Thus, we believe this research could be useful when encountering other critical situations in the future. Therefore, this research is of theoretical relevance.

1.3 Research questions

Based on the problem discussion one main research question and three sub-questions are formulated:

How and why do leader and follower work relations change when previously co-located teams become virtual teams in times of crisis?

- *How are the leader and follower work relations before and after?*
- *What affects the shift in work relations?*
- *How does this interact with the leadership styles used?*

1.4 Research aims

There should be a clear connection between the research questions and its aims as they are complementary in explaining what the research concerns (Saunders et al., 2019). Therefore, this research's main question aims to explore how and why the relationship between leaders and followers changes when becoming a VT in times of crisis. To be able to know how and why relationships change sub-questions have been formulated and this to gain more insight into our chosen topic. The first sub-question aims to explore how leader and follower work relations were before and after the team moved online. To be able to explore a change this is important to understand. The aim of the second sub-question is to reach a deeper understanding regarding what could have caused the shift in work relations between the leader and follower. Then, our last sub-question aims to explore if and how leaders adjust their leadership styles when leading a previously co-located team in a virtual environment.

2. LITERATURE REVIEW

2.1 Leadership

When people on a voluntary basis accept to be led by a person to accomplish something which they understand and interpret to be a necessity and desire to reach, leadership occurs. What is key here, is to consider leader and follower interaction, and to understand both sides, what leaders do and how followers are responding (Alvesson et al., 2017). When viewing leadership as involving both leaders and followers one pays attention to the character of leadership as being social, relational, and processual. Leadership is many times associated with the understanding of leaders “*doing the right thing or creating change*” (Alvesson et al., 2017, p.8). However, leadership can additionally be about “*maintaining morale, influencing meaning, ideas, values and emotions*” and this to make sure that the days, in general, are functioning well. Creating change or doing the right thing is not what leadership always is about (Alvesson et al., 2017, p.9).

An important distinction in the context of this thesis is between leadership and management. The two concepts are often used in combination. *Management* could be distinguished from leadership by connecting it to direction and control as they come with formal rights, whereas leadership could be associated with meaning, feelings, and values. However, to have a title as a manager does not mean that one is purely doing management tasks, a manager can also practice leadership (Alvesson et al., 2017). This is also something that Northouse (2013) points out as he mentions that many activities that are related to leadership also relate to management. However, he relates planning, budgeting, organizing, staffing, controlling, and problem-solving to management whereas leadership is associated with establishing direction, aligning people, motivating, and inspiring others.

This distinction will be particularly important to understand data collected from people within organizations with formal rights (managers). However, as management and leadership can be combined, we believe there will be responses that are more associated with management and others with leadership. Thus, having a clear distinction will allow separating the two and focusing on what is being essential based on our research questions and aims.

2.1.1 Relationship between leaders and followers

A traditional way to comprehend the relationship between leaders and followers has been to understand leaders as action-oriented, and followers as those who passively partake and abide by the leaders' orders (Alvesson et al., 2017; Baker, 2007). This was a common understanding that originated from theories about the Great Man. The Great Men were pre-industrial leaders who were easily distinguishable from their followers. Hence, it was believed that these leaders possessed inherited skills and qualities to lead, which were nothing that could be learned (Baker, 2007). The traditional view has, thus, been regarded from the vantage point of 'the leader'. To manage issues and problems has therefore boiled down to leadership styles. The leader is understood as the subject who motivates the follower (the object) to work towards a certain goal (Alvesson et al., 2017). Other common historical ideas of leadership have focused on successful leadership. These ideas have primarily focused on leaders' traits, behaviors, and styles (Zigurs, 2003).

But times are changing, from the Great Man, where followers were to passively follow the leader (Baker, 2007), to a more recent time where followers are understood to be a more important part of leadership (Bligh, 2011). Hence, followership is an area that gets continuously increased attention and where popular slogans published in academic work are; *"without followers there can be no leaders"* and *"the essence of leadership is followership"* (Bligh, 2011, p.425). This tradition started to gain momentum in the later years of the twentieth century. Here explicit theories of followership appeared and Kelley's (1988) work offered one of the first theories with this approach, where followers were taken from the periphery and placed in the center (Bligh, 2011). In Kelley's (1988) article, the focus was on how to make followers into effective ones. In the same year another researcher claimed, *"we need to understand leadership, and for this, it is not enough to understand what leaders do"* (Hosking, 1988 cited in Bligh, 2011, p.427). The followership has furthermore developed towards the active followership and one of the basic tenets defining this theory was that; *"followers and leaders must be studied in the context of their relationship"* (Baker, 2007, p.58). This is also something that Northouse (2013, p.15) reasons as he claims, *"leaders and followers should be understood in relation to each other"*, and this because of them being part of the leadership process. This understanding goes with the *relational perspective* as this perspective understands social reality as something that could be found within the relational context. Leadership is a process that is socially constructed (Uhl-Bien, 2006). Hence, *"a relational understanding is an opportunity to focus on processes in which both the actor and the world around him or her are created in ways*

that either expand or contract the space of possible action” (Holmberg cited in Uhl-Bien, 2006, p.661). The collective dynamics (e.g. combination of context and relations) are in focus within this perspective rather than the individual. Here both leaders together with others (followers) bear the responsibilities to construct and understand their relationship and how they should behave (Uhl-Bien, 2006).

This indicates that the understanding of leadership has moved beyond a focus on leaders’ personalities and/ or traits, towards an understanding of leadership as a process that is built on social constructions. Something that entails that leadership is co-produced by leaders and followers as one cannot exist without the other (Bligh, 2011), the co-production is relational (Baker, 2007; Uhl-Bien, 2006) and leadership and followership are key to understand the construction of leadership (Alvesson, 2019). This standpoint that leader-follower relationship together create leadership makes it reasonable to explore what occurs when becoming VTs, our assumption is that something changes in these relations.

2.1.2 Leadership as co-production

A subordinate is not just a follower because of his/her position but rather is so by accepting and seeing himself/herself as being a follower. Hence, leadership appears when both leader and follower agree on their relationship and their roles. Consequently, subordinates are not always followers as managers are not always leaders, indicating that formal hierarchical positions are not the only thing that should determine these roles, they are rather being granted (Blom and Alvesson, 2014). To understand leaders as active and followers as passive has therefore been challenged and more people have started to understand “*followers as active co-producers of leadership*” (Blom and Alvesson, 2014, p.346).

This does not indicate that followers cannot take a passive role. Carsten et al. (2010, p.546) argue that “*Followership schemas are generalized knowledge structures that develop over time through socialization and interaction with stimuli relative to leadership and followership*”. These schemas could then be influenced by standards and norms that an organization has which can indicate what behavior a certain role should take, and here standards could be reinforced. If understanding the leader having better expertise than the followers, then it is possible that the follower holds a followership scheme that could be described as passive. However, a follower taking a proactive scheme, then one is considering the leader-follower relationship to function interactively. Leadership is here understood to be based on mutual influence where leader and follower interactions are understood to co-produce leadership. Proactive followers have shown

taking responsibility and ownership. There is also an indication of them challenging their leader, by coming with new ideas and sharing concerns. Whereas the passive follower is doing what the leader tells them to do. Therefore, how the individual is understanding the organization and its structures can influence what followership schemes one constructs (Carsten et al., 2010).

Besides the influence that norms and standards can have on social constructions, there are also other influences such as the context created by the leader and the climate of the organization. These can play a certain role in what followership scheme one take as these can influence the behavior one might take within a specific situation. For example, a follower could take a more proactive role if the organization's climate is based on empowerment and autonomy, and when collaborations are allowed by the leader. This does not necessarily always have to be the case as a follower can take a passive role even though the organization climate and leader simplify the subordinate for taking a proactive role (Carsten et al., 2010).

2.1.3 Leadership styles

The situational approach to leadership is built on the principle that leadership needs to be changed according to the situation, the focus, therefore, lies on the leadership in situations. Adapting the style to the situation is what makes leaders effective, but not only, a leader is effective if able to match the style to the level of commitment and competence of the subordinate. Hence, what needs to be done is for the leader to evaluate and assess subordinates' competences and commitments to perform tasks. Depending on the subordinate, who is in a constant flow of change where skills and motivation change, the leader needs to adapt to how directive or supportive he/she should be (Northouse, 2013). Leaders who rely on more than one style, depending on the situation of the business, is suggested to be the ones reaching for the best results (Goleman, 2000).

Behavior patterns for the leader include *directive* behaviors, associated with tasks, and *supportive* behaviors connected to relationships. The former is a way to help people reach goals, setting timelines, making sure that the set goals are possible to achieve, etc. These behavior patterns are often one-way communication, it is a way to clarify tasks on how it should be reached and who is responsible for doing it. The latter behavioral pattern, the supportive one, is to make subordinates comfortable and this not only with themselves but also with the situation and with their colleagues. Instead of it being a one-way communication as the former behavioral pattern, both of them are involved. Ways to show supportive behavior is to listen to

others, asking for input, helping others to solve problems. Four different leadership styles can be identified with different behavioral patterns (Northouse, 2013), which are described next.

The first one is the *directing* approach and it is a leadership style that scores high on directive behavior and low on supportive behavior. This indicates that focus lies on directing the subordinate to achieve the goal, giving them instructions on how to do. Very little effort is on the other behavioral pattern (Northouse, 2013). This could be connected to Goleman's (2000) '*Coercive Style*' which is appropriate during times of crisis. Hence, it is necessary to be very cautious as it fits best only during rare circumstances, it cannot be used for long-term success (Goleman, 2000). The coercive style hit hard on the flexibility as leaders here often use a top-down decision-making approach. It also has negative effects if wanting people to take initiatives, because it will more probably lead people to lose the sense of ownership, hence, they will start to care less about their performance. This style does not bring clarity nor enhance commitment as it does not motivate people, and as people do not get motivated it is hard for them to comprehend how they will fit into the bigger picture (Goleman, 2000).

The second style is the *coaching* approach, which implies scoring high on both directive and supportive behaviors. The focus is both on how to direct subordinates achieving their goals and their needs associated with the social and emotional aspects of the relationship (Northouse, 2013). The opportunity that is given to the coaching manager is that he/she could give feedback, motivate, and make subordinates develop by challenging them. "*Given that the relationship between coach and the coachee is not just a critical factor but the critical success factor in coaching*" (McCarthy and Milner, 2013, p.770). What is often the focus when referring to leadership as coaching is the development, learning, and the empowerment of the subordinate (Alvesson et al., 2017). The coaching style is most effective when people being coached are open to it and this style can be applied in many different business situations. This style is providing one with many benefits as it impacts on both performances and the organization's climate. What makes the climate better is the constant dialog between leader and follower. It has a good effect on flexibility as people know that the leader cares and this brings more room to move in a freer way, constructive feedback is given. The ongoing dialog also has a good impact on the responsibility, clarity, and commitment, they know what they are supposed to do and as people are listened to, they feel committed (Goleman 2000).

The third style is the *supporting* approach and here the leader style focuses on the supportive behavior and less on the directive one. The supportive focus is a way to make subordinates

accomplish what needs to be done. This way of leading is to listen, giving feedback, and asking for input (Northouse, 2013). This style can be related to the '*Affiliative Style*' as this style is focusing on the people, "*people come first*". Hence, the most valuable things are the people and therefore much effort is on the person and his or her well-being (Goleman, 2000, p.84). The third style could also be correlated with 'leaders as psychotherapists' who are trying to influence the employee's inner life, trying to make them reflect on their identity and subjectivity. What the leaders do is that they listen, talk, and acknowledge people and what they have to say (Alvesson et al., 2017). To create harmony within the group is what they are striving for and as they do, loyalty grows, and as this becomes strong between the members more people share ideas and thoughts, communication flourishes. Flexibility is also something that employees gain as they are given the freedom to lead their own way, and flexibility brings trust, which people build when they get to know one another, thus, this leadership style builds relationships (Goleman, 2000).

The fourth and last style is a *delegating* approach and this style is low on both supportive and directive behavior. This style gives over the control to the subordinates once they have come to an agreement on how things should be done (Northouse, 2013). This can be correlated to Goleman's (2000) '*Pacesetting Style*'. The style functions if the organization contains employees who are "*self-motivated, highly competent, and need little direction or coordination*" often are these employees found in groups of R&D (Goleman, 2000, p.86). This style can demand a lot from its employees. The leader can here notice performance that is not reaching what is accepted and this he/she points out, things should according to the leader continuously go at a higher speed and simultaneously be improved. Hence, standards are set very high and expectations for others to perform accordingly are expected. Employees can often because of this experience, feel that the leader does not trust them and therefore initiative-taking may be absent. Then, leaders using this style does rarely give feedback and as feedback is absent employees can feel lost when not having the leader present, they do not have a clear direction where to go without someone guiding them. Lastly, commitment is not increasing using this leadership style as people cannot understand how they themselves with their own efforts are a part of the bigger picture (Goleman, 2000).

Leadership is co-produced by leaders and followers through social interactions. However, when teams move online due to a crisis and become VTs, these interactions are likely to change. Therefore, the next chapter will address the characteristics and challenges of a VT, which becomes the new reality for the previously co-located teams.

2.2 Virtual teams

2.2.1 What is a virtual team?

Growing globalization and technological development are forces that have brought us the possibility to engage in VTs. Organizations can benefit from VTs since they can utilize the employees best equipped for a particular task without any concerns for where they operate (Cameron and Green, 2020). Additionally, VTs enable organizations to operate in highly adaptive, flexible, and responsive ways as they are not affected by boundaries of space (Bell and Kozlowski, 2002), something that the business environment of today calls for if wanting to stay competitive (Duarte and Snyder, 2006). VTs have been defined as a “*collection of individuals who are geographically and/ or organizationally or otherwise dispersed and who collaborate via communication and information technologies in order to accomplish a specific goal*” (Zigurs, 2003, p.340).

VTs can be involved in any task and there is no explicit point where it becomes virtual, rather is it to what extent the team is virtual on the different dimensions (Zigurs, 2003). Co-located teams can thereby also display high levels of ‘virtuality’ as geographic dispersion is not the single element that defines a virtual team (Kirkman and Mathieu, 2005).

Zigurs (2003) offers a framework to systematically consider the ‘virtuality’ of VTs in four relevant dimensions: geographic; temporal; cultural and organizational (see Fig. 1).

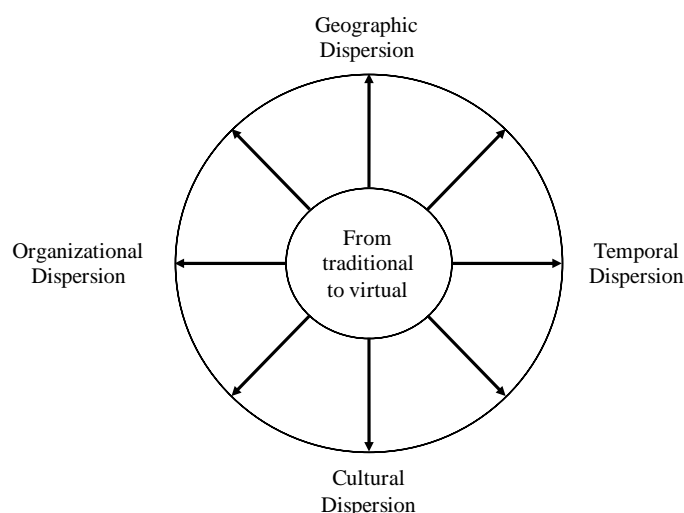


Figure 1: Dimensions of Virtual Teams. Source: Zigurs, 2003, p.340.

Geographic dispersion:

What defines this dimension is the lack of physical proximity among team members who are dispersed across geographical locations (e.g. Bell and Kozlowski, 2002; Dulebohn and Hoch, 2017; Malhotra et al., 2007; Townsend et al., 1998). *“Whereas the members of traditional teams work in close proximity to one another, the members of virtual teams are separated, often by many miles or even continents”* (Bell and Kozlowski 2002, p.22). This indicates that as long as any team is not physically proximal, it becomes virtual, since the means of communication inevitably alter. Albeit co-located teams also employ virtual tools for communication, they are more of a complement to face-to-face interaction (Bell and Kozlowski, 2002). Geographical dispersion has its most significant impact on decreased spontaneous interactions (O’Leary and Cummings, 2007).

Temporal dispersion:

Since boundaries of space do not limit VTs, they can naturally also transcend boundaries of time, something that enables them to work continuously across time zones. However, the synchronicity of the communication means determines the temporal dispersion where asynchronous means of communication, for instance, emails brings a higher degree of temporal dispersion than real-time communication, such as videoconferences (Bell and Kozlowski, 2002). Temporal dispersion highly influences teams’ problem-solving abilities in real-time which decreases as temporal dispersion increases (O’Leary and Cummings, 2007). *“Temporal dispersion amplifies spatial separations, makes synchronous interaction less common and more difficult, and generally exacerbates the challenges of coordination”* (O’Leary and Cummings, 2007, p.438). Asynchronous communication enables VT members to thoroughly think through both the received message and how to answer it, message receivers are hereby also allowed to consult with others or investigate the issue further before responding (Kirkman and Mathieu 2005).

Cultural dispersion:

“The possibility of misunderstanding is posited to increase in a more virtual setting, given the potential cultural differences and values of team members, which may lead to widely differing understandings of any given issue” (Marlow et al., 2017, p.579). Teams transcending cultural boundaries encounter variations in values, languages, and traditions that might restrict effective communication (Bell and Kozlowski, 2002). Therefore, in order not to let cultural dispersion

have a negative impact on trust and team cohesion it is paramount for VT leaders to cope with cultural differences and strive to identify common values in the team (Malhotra et al., 2007).

Organizational dispersion:

Traditional teams often are bound to their accessible means within the organization. Engaging in VTs, however, enables organizations to transcend its conventional borders in order to gain access to the best-qualified persons such as outside consultants or organizational members operating from different sites. This dimension is connected to the dimension of cultural dispersion as crossing organizational borders might lead to crossing cultural borders as well (Bell and Kozlowski, 2002). As organizational dispersed team members come together, demands of integration of work methods, culture, and goals come along, which might negatively impact collaboration as well as communication (Duarte and Snyder, 2006).

However, the scope of this thesis allows us to consider the dimensions of geographic dispersion and temporal dispersion as already existing teams move online. Something that clearly affects physical proximity and might affect the synchronicity of communication. Cultural and organizational dispersion are suggested for future studies to explore.

Kirkman and Mathieu (2005) suggest *Informational value* as another dimension which concerns whether the information through virtual tools is beneficial for the team or not in regard to effectiveness. Since not all teams are the same, rich information in text might not best describe everything. This way, teams concerned with complex animations or models score lower on the continuum of virtuality at this dimension since describing them in text cannot fully acknowledge its content. Therefore, this dimension will also be considered.

2.2.2 Becoming a virtual team

The transitional processes for VTs have to a large extent been ignored by previous research (Gilson et al., 2015). More attention has been given to how to start brand new VTs. Duarte and Snyder (2006) suggest 6 steps for starting a VT successfully, including selecting and contacting team members, define the team's purpose, etc. In that regard, the creation of a VT is not a transitional process. Similarly, Chinowsky and Rojas (2003) argue that relationships must be established in the early stages of a VT's development. This might be a result of the common understanding of VTs, that geographically dispersed individuals are brought together through computer-mediated tools in order to solve a common task (e.g. Munkvold and Zigurs, 2007; Saunders and Ahuja, 2006; Townsend et al., 1998).

Breu and Hemingway (2004) have explored what they call the ‘virtualization’ of a public sector organization that started to utilize temporary VTs as co-located inspection teams were dissolved and replaced by a resource pool. They conclude, for instance, that knowledge sharing among peers suffers when co-located teams become VTs as new managers and colleagues were to follow in their case. Furthermore, they state that members of teams becoming virtual have to create and maintain larger numbers of relationships, something that is difficult to do from a distance. However, their study involved 400 teams that were resolved.

Existing literature is often concerned with how to create VTs from scratch with members unknown to each other, facing challenges in, for instance, establishing trust and communicate effectively, etc. (e.g. Zigurs, 2003). However, our selected cases consist of existing teams in which adequate communication and trust are assumed to already have been established. Communication will, nevertheless, change somehow since the teams no longer will interact face-to-face as when co-located. Here our research gap becomes evident, demonstrating the importance of this study. Since the covid-19 crisis came suddenly, many organizations were unable to conduct the linear development of VTs suggested by the literature.

2.2.3 Challenges for virtual teams

To date, existing research has identified 4 dominant challenges for VTs: communication (e.g. Dulebohn and Hoch, 2017; Munkvold and Zigurs, 2007; Saunders and Ahuja, 2006), creating and maintaining relationships (e.g. Breu and Hemingway, 2004; Pauleen and Yoong, 2001; Saunders and Ahuja, 2006), establishing trust (e.g. Brahm and Kunze, 2012; Chinowsky and Rojas, 2003; Ford et al., 2017) and the lack of social interaction among team members (e.g. Chinowsky and Rojas, 2003; Daim et al., 2012; Dulebohn and Hoch, 2017).

Furthermore, speed is expected from VTs and it brings challenges as they are expected to be formed with appropriate members and able to carry out assignments quickly. At the same time, VT members are expected to appreciate the roles, tasks, and work efficiently. This can already be demanding in co-located teams in which team members share the culture and have defined tasks (Zigurs, 2003). *“Swift-starting virtual teams need to structure their interaction from the onset, including introducing team members’ background and competence, discussing project goals and deliverables, defining roles and responsibilities, and setting milestones”* (Munkvold and Zigurs, 2007, p.298). The pressure of swift task outcomes along with missing familiarity between VT members can lead to trust issues that harm the sense of belonging which might result in that newly formed VTs fail (Tong et al., 2013). However, we expect that leaders will

have lower demands regarding the speed of task achievement during a crisis that brings new work arrangements.

Key challenges that ‘spontaneous virtual teams’ are facing consist of identifying suitable tasks; finding members with the right competencies; addressing those members’ anxieties regarding temporal and geographical dispersion, etc. (Tong et al, 2013). Again, these challenges mostly apply to VT that consist of individuals previously unknown to each other that are gathered virtually through computer-mediated tools as the common understanding of VTs discussed above suggests. However, we believe that addressing VT members’ concerns of temporal and geographical dispersion as well as defining roles and responsibilities can be of use for this research in which team members already know each other. As we do not believe that the degree of trust will change within previously co-located teams becoming VTs in times of crisis, we now consider the aforementioned challenges of *lack of social interaction, maintaining relations, and communication*.

Lack of social interaction:

Temporary VTs more often engage in interactions related to the task to be accomplished whereas the social interactions are limited (Saunders and Ahuja, 2006). The absence of social interactions among VT members, might due to the use of virtual tools, risk decreasing the efficiency and type of interactions that result in success (Daim et al., 2012). Global VTs rarely engage in social contact or spontaneous communication which might result in a low degree of knowledge sharing (Morgan et al., 2014). Moreover, spontaneous communication allows social interactions that can enhance team members’ collaboration (Pauleen and Yoong, 2001). As face-to-face interactions in VTs are rare because of its nature, is it of utmost importance to establish a virtual communication effective enough for social interactions to prosper. This enables VT members to develop a similar understanding of problems since ideas are shared freely among team members (Daim et al., 2012). Whether challenges derived from a lack of social interactions transfer into the setting of previously co-located teams becoming VTs is yet to be addressed.

Maintaining relationships:

The strength of social relationships depends on the reciprocity among individuals, how much they interact, and how emotional intense their interactions are (Gibson and Gibbs, 2006). The degree to which VT members are able to build and maintain personal relationships determines

whether communication will be effective or not, which in turn is a key aspect of VT success. Furthermore, the maintenance of relationships allows a level of harmony within the group that likely ensures work tasks to be done as motivation increases. Therefore, relationships among VT members are of vital concern (Pauleen and Yoong, 2001). Due to the lack of social interactions and dependence on virtual tools, VTs often rely heavily on member-support functions to strengthen relationships within the team (Saunders and Ahuja, 2006). “*Team satisfaction is measured subjectively through members’ self-report on the degree to which team members are content with the process and outcomes*” (Saunders and Ahuja, 2006, p.673).

Communication:

An overreliance in communication through virtual tools can result in a misunderstanding that in turn can decrease both team communication and productivity (Daim et al., 2012). Additionally, misinterpretations and misunderstandings might arise from the use of bulletin boards, emails, and intranet as such communication is asynchronous, impersonal, and nonverbal cues are unidentifiable (Morgan et al., 2014).

The more familiar teams are with each other, the better they can cope with complex tasks even in situations with decreased communication. This indicates that VTs can perform well with reduced communication if there is a shared understanding among VT members, which also may aid VT members in anticipating how other members will react in different situations. VTs should be aware that increased communication might decrease its efficiency and therefore decide in what ways irrelevant communication might be reduced (Marlow et al., 2017).

Marlow et al., (2017) suggest two communication quality criteria: *Communication timeliness* and *Closed-loop communication*: Since VTs often operate across time-zones, some members might receive information off-hours and process it later than others. Furthermore, working in a virtual environment may also restrict the possibilities of real-time communication. These limits may influence to what extent VTs are well-functioning and their problem-solving abilities compared to co-located teams. Closed-loop communication, on the other hand, aims to avoid misunderstandings among VT members. This entails that the message transmitter ensures that the message was received as well as understood as intended and thereby closes the loop of communication (Marlow et al., 2017).

We believe that our selected cases are likely to come across discussed challenges as they become VTs. In order to cope with the new reality and its challenges, virtual leadership is needed which is discussed next.

2.3 Leadership in virtual teams

2.3.1 How does virtual leadership differ?

“Virtual leadership requires a unique skill set that first and foremost acknowledges the differences between leadership in a traditional, non-virtual environment and leadership in which team members are not co-located” (Byrd, 2019, p.20). However, research is often concerned with the advantages and disadvantages of VTs or how they differ from traditional teams, whereas leadership in VTs receives limited attention (e.g. Hoch and Kozlowski 2014; Malhotra et al., 2007). Leadership is essential to retain efficiency and motivation in VTs. However, virtual leadership is not the same as traditional leadership practiced face-to-face (Hoch and Kozlowski 2014). Hence, traditional leadership behaviors and skills are not to be directly transferred to a virtual setting and expected to prevail (Zigurs, 2003). *“Traditional leadership has its competencies, but virtual team leadership competencies differ; thus, the needed leadership competencies tend to increase in virtual teams”* (Maduka et al., 2018, p.699). Some of the virtual leadership competencies suggested by the authors consist of the ability to build team orientation; establish trust; provide constant feedback; technological skills, etc.

Leading VTs differ from leading traditional teams as there is a need for VT leaders to possess an appreciation of human dynamics without the assistance of face-to-face communication and the social cues received from there. Additionally, computer-mediated communication as the main tool of collaboration has to be leveraged (Duarte and Snyder, 2006). Without being physically present it can be hard for a virtual leader to know when team members are slowing down, when they are in need of social interactions or when directions or resources are needed. This is due to the fact that virtual leaders do not have the possibility to observe their team members as when being at the same place physically (Malhotra et al., 2007). Virtual leaders have in comparison with traditional leaders some restrictions which can hinder functions of leadership, such as the possibility for developing the team members. Thus, what is difficult for virtual leaders is to do their typical coaching, mentoring, and handling development functions (Bell and Kozlowski, 2002). This, together with the challenges VT faces discussed in section 2.2.3 supports that virtual leaders must attend to several matters that traditional co-located teams do not come across.

In conceptual studies it is argued that virtual leadership is not different from traditional leadership per se and that the essence is the same, namely achieving results through an influence process. However, what differs here is how leaders pursue results. Furthermore, it is argued that virtual and traditional leadership differ in that the former must address ‘paradoxes of virtuality’ such as remoteness vs. closeness and control vs. empowerment in their virtual setting (Purvanova and Kenda, 2018). We agree that virtual leaders face additional challenges compared with traditional leaders; however, we also recognize that they differ. Virtual leadership constitutes a different way of leading and even if achieving results through influence processes is the end, as this has to be done in other ways compared with traditional leadership due to a lack of social interaction and other 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, we argue that traditional and virtual leadership differ, not in what is strived for or what is important, but how it is, and how it can be exercised.

2.3.2 What is needed in virtual leadership?

VT leaders have to empower and motivate team members just as co-located leaders must, the difference is that for virtual leaders, this is conducted in a setting with limited communication possibilities (Mehtab et al., 2017), the communication available is vague (Zigurs, 2003), influencing team members through virtual tools is challenging (Purvanova and Bono, 2009) as the nature of VTs makes it more difficult to motivate team members (Kuscu and Arslan, 2016). VT members must be motivated and share the same goals in order to accept and carry out tasks, and that can be challenging to encourage in a virtual environment (Mehtab et al., 2017). *“Virtual team leaders will need to create infrastructures that facilitate information sharing, work planning and assignment allocation, feedback and review, information processing, decision making, and dispute adjudication”* (Bell and Kozlowski, 2002, p.44). Furthermore, virtual leaders need to mentor their members, enforce team norms as well as recognizing achievements (Malhotra et al., 2007).

The nature of virtual environments also requires virtual leaders to be adaptive because the difficulties they come across might not yet have been addressed earlier. In contrast, in technical environments, there are known rules, and reality is structured as well as predictable. Here, surprises are few, and teams operate in an environment with well-established methods. However, many virtual leaders do not operate in technical environments but find themselves in

adaptive environments in which there might be less clear and rational rules, an environment that may cause uncertainty and distress for its participants as there not always are answers to problems. Handling adaptive situations calls for virtual leaders to enable VT members rather than plan and control (Duarte and Snyder, 2006).

For virtual leaders is it also required to appreciate that the complexity of the VT's tasks affects the leadership. VTs with less complex tasks are able to endure a higher degree of geographical and temporal dispersion and dynamic member roles, whereas VTs engaging in highly complex tasks flourishes under conditions of real-time operations, clear boundaries and static member roles, therefore, leadership must be adapted accordingly (Bell and Kozlowski, 2002).

Since virtual leadership often entails autonomy for team members instead of control, the concept of leaders and followers participating in a process is suitable. Here, this means providing the prerequisites for the development and growth of both leaders and followers. This way, VT members can influence the performance of the team, and leadership becomes a joint endeavor (Zigurs, 2003) or co-produced as Alvesson et al. (2017) describes it.

Whether these requirements apply to previously co-located teams becoming VTs in times of crisis has to our knowledge not yet received any attention by research. However, we believe that it is likely that some of them, such as motivational efforts apply under such circumstances as well in which they might be of even higher importance. Similarly, adaptation to the current reality is called for, whether newly virtual leaders are ready or not. We also believe that mentoring team members and enforcing norms are likely to be needed for teams thrown into a virtual environment.

2.3.3 Leadership styles in virtual teams

Research has identified transformational leadership as effective in VTs (Purvanova and Bono, 2009; Ruggieri, 2009; Maduka et al., 2018). This might be because this leadership style motivates people to do more than expected as they impact on peoples' feelings and how they are thinking (Alvesson et al., 2017). It has been shown that transformational leaders, if doing it well, have a positive effect on a team as they are able to come up with more original solutions and put more effort into the work, than if the team was guided by a low transformational leadership (Mukherjee et al., 2012). It is also claimed that this leadership style has a good effect on the team's performance under circumstances that are ambiguous (Maduka et al., 2018). This leadership style has four characteristics (Alvesson et al., 2017): *idealized influence*, here the

leader is seen as a role model and is in this way influencing the follower morally in a good way. Second, *inspirational motivation*, meaning that the leader is able to increase enthusiasm and make followers see things in a positive way, which also includes increased team spirit. Third, *intellectual stimulation*, this the transformational leaders do as they make followers think critically which stimulates innovation. Fourth and last is the *individualized consideration*, and this is a way for the leader to guide the follower through coaching based on their own needs and desires (Alvesson et al., 2017). Consequently, this leadership style can be understood as very demanding, and if only looking at the effects that a leadership style has on their followers it can become problematic. Problematic in a way that it can overpromise positive effects that in reality can be hard to acquire. Transformational leadership is sometimes seen as “*the secret of effective leadership*” at least, this is what some supporters are hoping for (Alvesson et al., 2017, p.59).

However, if considering the transformational leadership and what this style carries, there has been identified leader behavior associated with this style that has a good effect on a virtual teams’ trust and compassion, namely frequent communication and coaching. If the leader is showing that he/she cares about the individuals, it can affect the groups’ emotions and attitudes (Kelley and Kelloway, 2012). Hence, coaching could be a way for virtual members to perform well. Also, when there is no possibility to be at the same place, as virtual leadership implies, then virtual coaching is the way to make people reach their goals, but here the leader must be competent in using technology effectively, and the same goes for the team members (Kerfoot, 2010).

2.4 Summary

Previous research has not investigated the transition of co-located teams and what they encounter when becoming a VT due to a crisis. We found this interesting to investigate as this topic is very timely. Our focus has been on the work relation between leader and follower as our assumptions are that relationship between leader and follower changes in some way when encountering another reality where face-to-face interactions are not possible, as it was before when being physically present. In our literature review, we have therefore discussed leadership, virtual teams, and leadership in virtual teams as these are important to understand if wanting to explore changes in leader and follower work relations.

Leadership can be understood in different ways, but our view is that it is relational. We, therefore, found the concept of co-production useful where we have discussed proactive

followers who together with the leader construct leadership. Then the situational approach to leadership will be valuable as this will make it possible to indicate how leadership will possibly change when leading a VT. The different leadership styles are representing different behavior patterns in different situations and are dependent on the follower and the situation. However, even though these styles are based on a more traditional environment, we believe that this will give us a good foundation when it comes to leadership styles in a new virtual environment.

Then, VT comes with new challenges that bring new demands on communication, relations, and social interactions as these do not occur face-to-face. This challenges the more traditional way of working and interacting with others. The understanding of challenges that a VT encounter will be useful as it will enable us to explore how leader and follower work relations might shift when co-located teams become VT.

Virtual leadership, here some argue that it will not be possible to transfer your own behavior into a virtual environment and make it function well. Furthermore, virtual leaders will have to understand human dynamics without face-to-face interactions and be able to motivate followers with constraints of communication possibilities. They also have to adapt and enable autonomy rather than controlling, which is management. This understanding will be useful as it will help us indicating how work relations might change as it brings new ways of being when entering a virtual environment. Additionally, we have brought up transformational leadership as this leadership style often is said to work well in a virtual environment. However, we will only focus on some specific behaviors that this style brings. These are then, frequent communication and coaching. We chose these because of our perception of how leadership is co-constructed in a social process.

3. METHODOLOGY

3.1 Interpretivist philosophy and qualitative method

Interpretivism is often combined with qualitative research and argues that there cannot be any universal laws for the social worlds of human beings as its complexity denies generalizations (Saunders et al., 2019). Within this philosophy, physical phenomena and humans are separated (Saunders et al., 2019; Bryman and Bell, 2017). It is important to understand this as the assumptions are that humans create meaning which the former does not, thus, these cannot be studied in the same way. Hence, the purpose of research taking on this philosophy is then to “*create new, richer understandings and interpretations of social worlds and context*” (Saunders et al., 2019, p.149). Therefore, interpretivism emphasizes language, culture, and history to be significant as these shape the understandings of the social world which shapes individuals’ experiences and interpretations (Saunders et al., 2019). We have taken an interpretivist stance with this research as we were concerned with understanding the participants’ experiences of a social phenomenon that cannot be generalized but explored and interpreted.

Then, qualitative method is characterized by focusing upon the relationship between participants and their words and images as this creates meaning. This implies both cognitive and physical access to people, and those who take part in the research are called participants (Saunders et al., 2019). The strengths of using qualitative method are that an individual’s experiences can be understood in-depth as information of what that person experiences and how it is interpreted can be unfolded. The use of qualitative method is furthermore a good way to discover processes that are hard to comprehend by only looking at its surface in, for example, teams and individuals (Bluhm et al., 2010). Our main intention with this research was to explore the changes in work relations between leader and follower that occurred when moving teams online, which altered the working practices for both leaders and followers. It was important to consider both perspectives within their new context for being able to understand how and why their relationship changed due to the new work mode. Therefore, a mono method qualitative study was selected in order to gain an in-depth understanding of how moving previously co-located teams online due to a crisis affected the leader-follower work relations. A mono method qualitative study is when there is only one technique used when collecting data, e.g., conducting semi-structured interviews (Saunders et al., 2019).

Furthermore, interpretive qualitative research contains four characteristics (Bluhm et al., 2010). *First*, the research occurs in its natural setting. *Second*, when collecting data, it derives from experiences that an individual has, participants are given a ‘voice’ within qualitative research. *Third*, when gathering data and making analysis the process is reflexive which means that, as the situation progresses, data and analysis changes on the way. Consequently, data guides collection, and this makes initial plans flexible. *Finally*, methods for data collection and analysis are not standardized as it is within quantitative research. Here, there are many ways of collecting data and a variety of techniques to analyze. Therefore, awareness of which one to use is important to carefully consider (Bluhm et al., 2010). These characteristics will be possible to find throughout this chapter as we, for example, have chosen case study strategy, conducted semi-structured interviews, analyzed our data with help of thematic analysis, and conducted this research using an abductive approach. The main purpose of this research was to explore how and why moving previously co-located teams online affected work relations. Therefore, conducting semi-structured interviews with both leaders and followers allowed us to gain a rich understanding of the new context, but also how it was connected to leadership styles.

3.2 An exploratory study with an abductive approach

Exploratory studies are about gaining insight into the chosen topic and here one can learn what is going on by asking open questions. The research questions are often starting with ‘what’ and ‘how’ and so do questions when collecting data through interviews. These questions are then enabling one to clarify a problem, issue, or phenomenon which might not be clear to its nature (Saunders et al., 2019). Hence, as our perspective on leadership is that leaders and followers together create leadership, we wanted to analyze this by exploring how and why the transition from being a co-located team to become a virtual team affected their working relations. These relationships must continue to work even though the new situation is ambiguous. Thus, it made sense to explore, and we did this by asking participants open-ended questions.

Then, three different approaches can be used to theory development, namely: abduction, deduction, and induction, where abduction recently has gained more attention in disciplines such as business administration (Bryman and Bell, 2017). An abductive approach moves back and forth between data and theory, whereas deduction has a more linear course, moving from theory to data. The third option, induction is working from data to theory. Abduction is flexible in comparison to the other two approaches and it has been argued that pure induction or deduction is very hard to accomplish (Saunders et al., 2019). Therefore, abduction could in

some cases be understood to avoid limitations that the other two approaches might bring (Bryman and Bell, 2017). Abduction often starts from a new insight or ‘surprising fact’ which has been observed and from there one is looking at theory and this to understand how the ‘surprising fact’ might have occurred, this new insight can appear anytime during the project (Saunders et al., 2019). We conducted a literature review and prepared an interview guide. This enabled us to benefit from the interviews as we became more familiar with the subject, allowing useful follow up questions to be asked. Additionally, new insights occurred during and after the interviews, which enabled us to adjust the theories used. In this way, we worked abductively, thus we were not limited to either deduction or induction.

3.3 Case study strategy

We have conducted a cross-sectional multiple case study which is centering its findings on a particular period of time. Hence, studies can be either longitudinal or cross-sectional, the former needs more time and it can enable one to study development, whereas the latter is focusing on a ‘snapshot’ of time (Saunders et al., 2019). Case studies are favored when research questions start with either ‘how’ and ‘why’ questions. Furthermore, it is preferable if what is being researched is difficult to manipulate, and when the events are contemporary, meaning, dealing with both the recent past and the present. It is also desirable to conduct this kind of study if the researcher has limited control (Yin, 2018). Other authors claim that there should be no attempts to control the context and that this is a key difference from other methods used (Gibbert and Ruigrok, 2010). For example, setting up an experiment one can manipulate easily as having some kind of control (Yin, 2018). *“A case study is an in-depth inquiry into a topic or phenomenon within its real-life setting”* and therefore it is possible to generate rich data when undertaking a case study (Saunders et al., 2019, p.196).

Our main research question starts with ‘how’, and so do two of the sub-questions. Furthermore, our research is to explore the change in work relations between leaders and followers by moving online and how this interacts with leadership styles used. The focus has been on a specific period of time as our focus has been on a contemporary issue that came with the crisis of covid-19. However, it could be argued that it both deals with the recent past as well as the present as we needed to know what affected the shift in the working relations. Therefore, we considered a case study strategy to be appropriate to undertake for this research as we want to explore our cases within a real-life setting.

Furthermore, a case study can either be single or multiple (Saunders et al., 2019). Multiple-case studies are often favored over a single case study as the latter will make one “*put all your eggs in one basket*” (Yin, 2018, p.98), meaning that the tolerance for mistakes is lower as there will be no more cases to look into. Additionally, selecting more than one case will enable one to come up with analytical conclusions that are more valuable than only selecting one case. A reason to choose more cases is that it can offer one to contrast situations (Yin, 2018). Thus, having more than one case permits one to compare but also to find the uniqueness within each case (Bryman and Bell, 2017). We decided to conduct a multiple-case study as it allowed us to explore contrasting views, finding similarities, and what was being unique, on what was happening with working relations when co-located departments became VTs. A case can either be a location (e.g. shopping mall), an organization (e.g. commercial business), an event (e.g. music festival), etc. However, what is important is that the chosen case can be clearly distinguished from its environment. If that is not possible, then it cannot be defined as a case (Denscombe, 2014). Hence, boundaries are key to define as it will enable one to understand the context or setting about the topic if doing so (Saunders et al., 2019). Our cases are teams within organizational departments and the boundaries for this research were that our cases had gone online because of the outburst of covid-19. Meaning that their normal way of meeting and interacting with one another had changed.

3.4 Selecting cases

The selection of samples can be done in a variety of ways, but two common techniques are probability sampling and non-probability sampling. The former one is often used when conducting survey research and here one should be able to generalize the target population. Then, the latter sampling technique is often used together with qualitative research where it is needed to have a more in-depth understanding. This allows one to collect rich and informative data from fewer cases. However, the sampling technique should be chosen based on the research questions and the objectives (Saunders et al., 2019). We selected the non-probability sampling technique as our research was focusing on the work relations between leaders and followers. We wanted to explore how and why such relations changed when moving co-located teams online due to a crisis. Therefore, we needed in-depth and rich information that probability sampling was unable to provide us with.

Purposive sampling goes with the selected sampling technique above (non-probability sampling) as it involves one to choose decisively (Denscombe, 2014), meaning that some units

are more probable to be selected for the study than others (Bryman and Bell, 2017). Hence, here one is carefully selecting cases that could enable one to answer the research questions and meet the objectives of the research (Saunders et al., 2019). This sampling technique is often used when conducting case studies since these can enable one to get the information needed (Saunders et al., 2019). Being aware of the boundaries, we got our first contact with people that we knew had changed their way of working, that had transitioned online due to covid-19, in three different organizations. We asked them if the research would be of interest and if they could contact others within their departments for potential participation in the study. Hence, all the chosen cases were selected with purpose and this to be able to answer our research questions. Additionally, our cases could be described to be chosen with ‘self-selection sampling’. That is when either advertising or asking individuals if they have any desire to take part in the research. This technique goes under the label ‘volunteer sampling’ which is part of non-probability sampling (Saunders et al., 2019).

Thus, our sampling size is from 3 business cases with 10 participants in total. When conducting case studies there are often one or more cases that are being explored and here data are collected from either all participants or a sample of participants. What is important when deciding how many samples should be done is based on: “*what you need to find out, what will be useful, what will have credibility and what can be done within your available resources*” (Saunders et al., 2019, p.315). Due to our limited timeframe and the situation that many companies face around the world because of the pandemic, we choose from an early beginning to only select Swedish companies as we knew more about the situation here than in other countries. This did not, however, affect what we needed to find out nor were they less useful. Hence, the cases gave us a good insight into leader-follower work relations and how it was affected when previously co-located teams entered a virtual setting. In Table 1 details about our participants and how the interviews were conducted can be found. Additional case information is presented in chapter 4.

	Alias	Position	Department	Date of interview	Interview medium	Duration (min)
Case A	<i>Alpha Team</i>					
	Anna	Group data manager	Data processing	2020-04-21	Zoom	65
	Alice	Data specialist	Data processing	2020-04-23	Zoom	39
	Alex	Group data owner	Data processing	2020-04-21	Zoom	43
	Allan	Data developer	Data processing	2020-04-22	Zoom	31
Case B	<i>Bravo Team</i>					
	Bianca	Logistic manager	Logistics	2020-04-24	Teams	79
	Bella	Costumer support/logistics	Logistics	2020-04-24	Teams	40
	Billy	Costumer support/logistics	Logistics	2020-04-24	Teams	43
Case C	<i>Charlie Team</i>					
	Carl	Product development manager	R&D	2020-04-27	Zoom	38
	Carina	Design engineer	R&D	2020-04-27	Zoom	39
	Chris	Design engineer	R&D	2020-04-27	Zoom	32

Table 1: Interview information.

3.5 Data collection

When collected primary data by conducting semi-structured interviews. These kinds of interviews are often carried out face-to-face and the interviewer guides the interviewee with a list of predetermined themes and related key questions (Saunders et al., 2019). In the thesis' appendix (A and B) these themes and key questions can be found. Thus, when following an interpretivist approach there is not a fixed order on how to follow the themes or when to ask the predetermined questions, these are instead being asked in relation to what responses the interviewee gives (Saunders et al., 2019; Bryman and Bell, 2017). As we followed an interpretivist approach, the semi-structured interviews became very flexible as we carefully listened to their answers and asked follow-up questions depending on what was being said.

We did not conduct any interviews face-to-face, but instead, we used other available options, suitable for times of social distancing. According to Saunders et al. (2019) are telephone and internet-mediated interview alternatives. Yet, these alternatives do not come without disadvantages as, for instance, telephone interviews are associated with limited personal contact and reliance on what is being said (Saunders et al., 2019). In other words, trust issues can occur, and it is not possible to take nonverbal cues or body language into consideration. Telephone interviews have nevertheless some advantages such as access, cost, and speed (Saunders et al., 2019). If failing to establish trust the research's reliability might suffer (Saunders et al., 2019). Internet-mediated tools are then called electronic interviews where synchronous ones are carried out in real-time (Saunders et al., 2019). *“Electronic interviews featuring vision and sound may be conducted using Voice over Internet Protocol (VoIP)”* (Saunders et al., 2019, p.478). Conducting the interviews with software such as ‘Skype’ is, therefore, a viable option

that has the same advantages as telephone interviews as discussed above (Saunders et al., 2019). Furthermore, this option can also be comparable to normal face-to-face interviews as this can be conducted in a very similar way, the only difference is that it is done at a distance (Denscombe, 2014). Additionally, applying to both internet-mediated and telephone tools, it will be possible for both the interviewer and interviewee to stay in their safe environments during the interview (Saunders et al., 2019; Bryman and Bell, 2017).

We collected primary data from teams that normally did not engage in virtual teams or distant leadership but were temporarily involved with it due to the covid-19 crisis. At first, we intended to interview the participants in person, but due to the very situation that caused the increase of working out of office, we used internet-mediated tools such as 'Zoom' and 'Microsoft Teams' to conduct our interviews. Using these tools, we understood being advantageous as these communication channels now are being frequently used between superiors and subordinates. The advantage is that it made us understand their reality in a better way as we also faced some difficulties using these tools in the beginning. One interviewee chose not to have the web camera on, and this made it more like a phone call which some of our participants also mentioned when we collected data. We asked the participants for permission to record the interviews in order to transcribe them and we only conducted interviews if we were allowed to record. Additionally, we took notes during the interviews because of the advantages Saunders et al. (2019) explain are associated with it, for example, it constitutes a backup, can assist in staying concentrated and enable follow-up questions. This was a way of interviewing that then was appropriate during a pandemic that made people work remotely. However, Saunders et al. (2019) explain that there are several ethical issues concerning these interviews such as personal data issues. Hence, we considered GDPR and other data protection legislation when we were conducting this research.

3.6 Data analysis

Thematic analysis is commonly used when analyzing qualitative data and its objective is to find themes within a set of data. Thematic analysis entails coding qualitative data in order to discover themes or patterns that can be analyzed. This approach offers an orderly and logical analysis of qualitative data that enables researchers to gain in-depth knowledge of what is being studied (Saunders et al., 2019). To identify different themes and how it is done has no definite rules, but there have been some recommendations established on how to search for themes, which can

be done for example in these three following ways: to search for repetitions, finding similarities and distinctions or the use of metaphors (Bryman and Bell, 2017).

There are several analytical approaches that can be used but we have used the key processes from thematic analysis. We have selected the thematic analytical approach in which 5 different key processes are to be followed suggested by Rapley (2016). The *first* step is to get familiar with data that has been collected and this includes writing down comments and ideas. The *second* step is where the initial codes are identified and here the whole dataset is coded in a systematic way. The *third* step is where one starts to search for possible themes. This is done by finding codes that are being similar which then are assembled into possible themes. The *fourth* step is to double-check the possible themes, here it is important to see if the dataset is aligning with the themes. The *fifth* and last step is the stage where themes are to be refined (Rapley, 2016).

After having transcribed the interviews, our first step in getting familiar with the data was to read and re-read the transcripts several times in order to construct the narratives in chapter 4. In doing that, we both got familiar with the data and had the possibility to note ideas that could be interesting to look into further on. Then, we started coding the set of data, this process also made us more familiar with data as it was scanned for initial codes which were noted in 'Microsoft Excel' for a comprehensive overview. Coding the set of data made us identify patterns and themes, therefore, codes related to each other were reassembled into themes. This was followed by the construction and refining of the themes in a way that appreciated the set of data.

3.7 Quality criteria

Quality criteria related to quantitative research (reliability and validity) is problematic to apply to qualitative research as it is basically impossible to replicate social settings in a way that, for example, experiments can be replicated (Denscombe, 2014). However, there are alternative criteria for these that can be applied for qualitative research (Saunders et al., 2019). Transferability is one, and this is the parallel criterion to what quantitative studies label generalizability or external validity (Saunders et al., 2019). Generalizability is not applicable for a qualitative study because of its small numbers which cannot be representative of the larger population which this criterion suggests (Denscombe, 2014). However, by providing future researchers with a full description of, for instance, design, context, findings, and interpretations it is possible for them to judge if the research is possible to be transferred to another setting

further on (Saunders et al., 2019). Full description or ‘thick description’ can also be to describe cases in detail (Creswell and Poth, 2018). Within our research, we have given our reader descriptions of how things were conducted in our methodology chapter and also provided the reader with clarifications on where we stand and how we make different decisions, for example within our literature review. Additionally, a thick description has been made within chapter 4 by including the most essential from our interviews and this with a narrative style. Having done this, we can also fulfill the criterion *dependability*, which is done by giving a full description of the process including for example; choice of participants, analysis, and formulation of research questions, and so forth (Bryman and Bell, 2017).

Credibility is another criterion that in quantitative research is called internal validity (Saunders et al., 2019). This criterion is about demonstrating data to be accurate and suitable, but this is dubious within qualitative research as it cannot be fully approved that what is demonstrated is correct to the fullest. Therefore, credibility is used instead of validity (Denscombe, 2014). There are different ways of dealing with this criterion and one way is to talk to people about ideas and findings, to reflect and test what has been found (Saunders et al., 2019). As we were two conducting this research, we shared thoughts and ideas and this to reflect on what was being found, if we agreed upon it or if we could look on it in another way. Sometimes we also asked for other peoples’ interpretations. Another way to deal with this credibility criterion is to check data and analysis with participants (Saunders et al., 2019). Due to the time constraint and that we conducted an amount of 10 interviews that included both team leaders and members with 3 teams, it was not possible to double-check this on time. However, we believe that we can argue that it is credible as all interviews were carried out through either software such as ‘Zoom’ or ‘Microsoft Teams’ in order to pick up nonverbal cues through the camera. 9 out of 10 interviewees agreed to have the camera turned on, all of them agreed upon being recorded. The recordings provided us the possibility to transcribe the interviews very thoroughly which enhances the thesis’ credibility as the gathered data is what the interviewees stated during the interviews.

All interviewees were informed of the purpose of the thesis, how it was to be conducted, what themes were going to be discussed, and that they could cancel the interview at any point. Additionally, as anonymity was promised and all interviewees received an alias for this study, it is reasonable to assume that they shared their experiences of the situation in a sincere and frank way. Taken together, we believe that this study is demonstrating credibility.

3.8 Research limitations

The time limit of this project made us decide to conduct a multiple case study as it suited the time frame. Case studies do not aim to statistically generalize a population (Gibbert and Ruigrok, 2010). Our intention with this multiple case study was, however, not to generalize but to explore in-depth how previously co-located teams handle becoming VTs in times of crisis. We intend to develop an understanding of how the team leaders and members that are participating in the study are handling the current situation. They are not to be seen as representative for all Swedish teams becoming virtual due to covid-19. The insights gained from the data are to be interpreted by the authors. Such in-depth knowledge is according to Saunders et al. (2019) of more interest from an interpretivism point of view. We can thereby argue that the trade-off with low generalizability is an acceptable limitation since the contribution of this research is of another kind.

The interviews were conducted in Swedish which gave us a nuanced understanding as it is our mother tongue. However, translating the transcripts into English has, for instance, affected the direct quotations. None of the content was changed, just translated to the best of our ability. Some phrases or sayings do not directly translate into English, in those cases, we used synonyms to capture the content of what was being said.

3.9 Ethical considerations

There might be some ethical concerns regarding this topic due to the severe consequences of covid-19. For instance, if we were to interview people in industries that suffer heavily from the effects, such as the hospitality industry, it would be questionable due to the proximity in time to ask how they handle the situation of working remotely when they simultaneously had to let go of employees due to lost demand. The sensitivity of the topic and timing of the research were two aspects that according to the ‘Goldilocks test’ could have made the research questions too hot (Saunders et al., 2019). Although, by avoiding approaching these industries for interviews, we were able to bypass the sensitivities and timing issues of the topic, thus, we were able to conduct the research, as it became less hot. Since we were aiming to explore how leader-follower work relations were affected by moving previously co-located teams online, we cannot see that the topic should be sensitive. However, if we would have been informed that there were severe consequences for an organization that we were approaching, the topic might be too hot and we would not have attempted to carry out the research under such circumstances due to the well-being of the participants.

4. FINDINGS

This chapter presents the empirical data from the conducted interviews. All the interviewees are part of a previously co-located team that, to some extent, has become a VT due to the covid-19 crisis. The data is presented as individual narratives in order to capture their perception of the current situation. The narratives are analyzed in the next chapter. This chapter commences with a short description of the organizations the cases belong to.

Alpha operates in the information technology industry and is running its business in 18 European countries. Alpha offers its customers business, credit, and market information. Alpha has been impacted by the covid-19 crisis to the degree that they have offered their employees to reduce working hours with 20 percent and in return keep 90 percent of the wages.

Bravo is a worldwide enterprise that primarily operates in the manufacturing industry in which they provide their customers with automotive and industrial applications. The covid-19 crisis has forced Bravo to decrease production and introduce a short-term layoff in which employees are working 60 percent and keeps 94 percent of the wages.

Charlie operates in the energy industry and designs as well as produces technical buildings, switchboards, and other voltage products, etc. The energy industry has not been impacted by the pandemic as others have. Charlie has now more orders than ever, in the middle of the crisis. Accordingly, working hours have not been reduced.

Henceforth, we will refer to the departments as Alpha Team, Bravo Team, and Charlie Team respectively as those are the cases we study. The company to which the departments and teams belong, we refer to as Alpha, Bravo, and Charlie.

4.1 Case A

Alpha Team is a Swedish data processing department of an international company located in Stockholm that provides its customers with business, credit, and market information. The team consists of 11 team members including the team leader. Alpha Team is working virtually until further notice.

ANNA

As group data manager, Anna has the overall strategic responsibility for all data that goes through the company's different sites. Her role is twofold as she also is responsible for a Swedish team consisting of 10 data specialists who are running the core of the company's Swedish operations. Anna has been in the present set-up for one year but has been responsible for parts of the current team since 2014.

How Anna experiences VTs

Anna describes that the current situation has brought a lot of anxiety concerning the future of the workplace as there are no answers. She says that she only can be transparent and support worried team members. She explains that it is a tremendous challenge when facing this unprecedented situation for which there are no policies.

Anna's team has daily check-ins with 'virtual fika' where everything from beekeeping to the lack of betting possibilities due to the virus outbreak is discussed. This to check how everyone is doing as Anna does not know about everyone's domestic conditions. Alpha has provided Anna with training in this since there might be that there are troubles at home.

Anna explains that virtual work modes are good enough for a period of time but that the lack of social interaction is a concern, which from a lot of energy is gained. She thinks that all are trying to keep their faith during these times but that many miss the workplace and the social input received from there.

Leadership

Leadership for Anna means being a role model, being yourself, and being responsible. She says that she sees leadership as parenthood, mentoring, and coaching. Her mission is to be a leader embracing soft values 80 percent of the time and a manager making tougher decisions 20 percent of the time, decisions that not always are pleasant for the ones involved but bring the company's strategy forward. She says: *"If I refer to an animal, a border collie, which herds its pack over the plains and mountains"*. When Anna is herding her team with an age range from 20 to 67, she feels like the border collie and tries to create a common understanding of how to move forward, that is her leadership mantra. She dislikes micromanagement and believes that a leader must be able to trust their employees. Anna also states that it is not the seconds spent

on a project that counts, but the result of your efforts, and however the employees manage that is up to them. Reported working hours are not reviewed, and that is leadership for Anna.

She points out the roles she has to take on: *“I use to say that you have to be a psychologist, grandmother, and schoolteacher, there is a lot in that pot”*. This entails that Anna adapt her leadership to the situation at hand and different personalities are given different kinds of leadership. She explains that the biggest reward is to see the ones she works with develop.

Anna mentions that the Alpha Team is practicing something called ‘self-managed teams’ in which the team members together decide their day-to-day work for the upcoming two weeks in which they have prioritized queues. Anna’s role here is to provide guidance so what they are working with and have in their lists are in line with the company’s strategic goals and to help prioritize. She elaborates: *“They control their workdays and my mission is to outsource myself, they should not even need me to do their job. They should dare to make their own decisions. Often it is about they are wanting my affirmation”*. Anna explains that the current set-up gave her several roles and that the team needs to work like this, otherwise she would never have the time.

Anna explains that for 1.5 years the new work mode of ‘self-managed teams’ has been sneaked in and that this suits some better than others, but almost all employees are senior enough to handle this. She says that the employees that have much experience and possess other knowledge should not be pressured and that you have to choose your battles wisely. If people are recalcitrant and think that things are difficult, then they can continue to work as they do but new work modes, or whatever it might be, will eventually be sneaked in. Anna says: *“There are only three things: accept the situation, influence the situation, or withdraw. It is not a prison we are working in.”*

Anna says that when she notices that negative energy is impacting team members, she encourages them to take a ‘reflection day’ and do what they need to do while they still can report worked hours as usual. She points out: *“I have to trust them, it is not the duration of the work, but what gets delivered. A retired co-worker once told me: every game is not the playoffs”*. Something that made her think that what matters is the total contribution.

Leadership in VTs

The number of individual meetings has increased according to Anna and she tries to be transparent and inform the team about updates. She believes that it is difficult to provide feedback in a virtual setting with its lack of nonverbal cues and that the feedback becomes much more powerful if given in person. Additionally, Anna says that having sensitive discussions does not suit this kind of setting, that it becomes too impersonal.

Anna explains that every second week surveys are sent to all the employees which contain questions regarding the status of the team, leadership, if the employee would recommend the company as an employer, etc. She has noticed that the results therefrom are declining and that the team does not perceive her as a present leader. She believes that the virtual work mode prevents her from the informal conversations as they currently only have planned meetings, and that lot is lost from that since the team members get some recognition from such unplanned meetings.

Anna says that the written word can cause misunderstandings and when she notices that conflicts might be arising in virtual channels, she enters the chat and asks what is going on or if the involved can explain how they think. She does not think that the involved parties realize that she gets involved in order to stop the conflict. Anna experiences that she has to be more coaching and supply present support that she never has to do at the office. Team members ask her for help with things she knows that they can carry out themselves, she is not sure if it is the lack of social interaction causing this or if she just has not reflected on doing it earlier. Anna believes one has to be calm, flexible, pragmatic, and listen a lot to succeed in virtual leadership. Technical issues cause some concerns and then a leader must explain that nothing is then expected from the team member, that it is not their fault. The trust level must be extremely high to work like that, Anna says.

Challenges & possibilities

Anna explains that one advantage of engaging in VT is that every team member now is forced to learn how to use the virtual tools that previous only some did because now no one will do it for them, the technical competence is thereby increased. She says that commuters save plenty of time when working virtually and that dog owners see some positive aspects by working from home.

Downsides are the lack of social interactions and their benefits along with the fact that she cannot control the work environment at team members' homes. This causes Anna to wonder how people are sitting and feeling. It is her responsibility to ensure that people will not have back problems in six months or enters a depression due to anxiety of the employment, and that is a major challenge at the moment she says.

ALICE

Alice is a data specialist who is accountable for the financial information that Alpha brings into the Swedish market. She has been at the company for 4 years and in the team for 2.5 years.

How Alice experiences VTs

Alice says that she enjoys working in VTs and for the last 6 months Alpha Team has worked a lot with 'Microsoft Teams' which becomes very helpful under these circumstances, that it was already implemented. She believes it was lucky that they were so well prepared. However, Alice misses talking to her colleagues even if she thinks the communication works well through the virtual tools. The social parts of work are decreasing, such as stopping by at someone's desk, Alice says. She describes that spontaneous knowledge transfer suffers and that the decision-making is much slower in this work mode. Additionally, her work tasks take double the time compared to when working at the office. She explains that the current situation is what it is and as long as you do not make excuses, things are allowed to take longer and that the leaders know who to keep an eye on. Alice says that communication in VTs has to be clear and confirmed in order to avoid misunderstandings. Additionally, she believes that turning the camera on during meetings or conversations are very helpful to verify what has been said also has been understood. The lack of nonverbal cues makes communication more difficult, says Alice.

Leadership in VTs

Alice is very independent at work but if she needs support her leader provides it, she believes it works well. She appreciates the 'Corona task-force' that provides her with information regarding the current situation.

Engaging in VTs makes Alice take on more responsibilities as she more often has to look for answers herself than discussing issues with Anna. She says that it might feel as she burdens or interrupts others when calling, compared to stop by at their workstation which gets much more informal. Alice explains that the spontaneity is gone, now she must reach out more actively if

needed. However, she feels that she can contact Anna if needed and that she always is available for urgent matters.

Alice appreciates the daily video calls in which the entire Alpha Team is participating if having the time. These calls were previously only held 3 times a week, however, the team wanted them 5 days a week which Anna listens to, something that feels very good for Alice. She says it is important for those living on their own, not to get too isolated.

The support received in a virtual setting is very individual and Anna is aware of Alpha Team's limitations, challenges, and what they are good at, Alice says. *"I do not need more support than the social interaction I receive, that is enough for me. If it does not work, I know I can contact my manager"*.

The situation's uncertainty has been addressed by Alpha's official channels where Alice receives a lot of useful updates. She believes that communication is fine and that Anna also is communicating this information. The team has daily meetings that they call 'stand-ups' and on a monthly basis they conduct individual meetings, the frequency is the same now, Alice says. She explains that other communication is getting less frequent but that she, however, feels that she can get in touch with the team leader if needed and that is the most important part according to Alice.

Alice describes the current leadership as facilitating as the 'stand-ups' are provided whether the team leader can participate or not, she says that the leadership now concerns communication and structuring. The team leader sometimes commences the 'stand-ups' by asking how everyone is and what made them happy or proud today, something that Alice describes as motivational. The trust Anna puts in Alice is also motivational, she is allowed to mind her own business even now when working virtually. That is something Alice appreciates, that mutual trust is present.

Alice says that the largest challenge for leaders of VTs is how to ensure that the team members are doing well, and that is not particularly easy when not being at the office. She explains that it is easier to put on a smile for 30 minutes if having an online meeting than to hide your feelings an entire day.

Challenges & possibilities

“The work environment has the biggest impact; I am sitting in a damn bed. We have worked like this for 4 weeks”. Alice explains that her colleagues have a better situation since she currently is moving. Members of Alpha Team are allowed to gather work equipment such as screens from the office which Alice thinks are very generous, however, she does not possess a driver’s license or access to a car, that is preventing her from collecting what she needs. Nevertheless, working from home is a constant reminder of the work tasks, and Alice feels that it becomes like living in a workplace. She says: *“I went home to a colleague one day, he had it like that, he even had shoeboxes under his laptop to get it in the correct height. That is nothing you move around, then you have it like that”.* Alice explains that she has to establish a home office if this continues and that she would be devastated if they have to continue to work like this for the rest of the year.

Working from home, Alice feels lonely and faces challenges in staying focused during long periods of time. Being at the office makes her more focused where she also experiences much fewer distractions. She says that the situation is interesting, that she gets to know her limits. However, she would not want to work from home for this long again.

Positive aspects of engaging in VTs are that some are showing a huge improvement in technical competence, something that according to Alice would benefit the Alpha Team’s overall efficiency. She usually tries to assist older colleagues with technical difficulties, but she says that there is a patience threshold as well. She explains that if everyone learns how to use the virtual tools, they will no longer have to sit and wait for technical support.

ALEX

As group data owner, Alex works independently and sets his own goals, some of his tasks involve working with Nordic B2B data and have responsibility for delivering to one of Alpha’s biggest partners. He has been at Alpha for about six years and with Alpha Team for about a year. He has previous experiences working virtually as he is working with other Nordic countries where they are meeting through ‘Microsoft Teams’.

How Alex experiences VTs

After the second week working from home, Alex thought it was very tough due to a working environment not adapted for work over a long period of time, he sat with his own laptop. So,

he decided to ask if he could borrow screens, computer mouse and keyboard which then was fine, this he appreciated. He claims that this can prevent him from getting back and neck problems further on but also enable him to work more efficiently. Regardless of the first week, Alex thinks it was a very smooth and flexible to change his working environment to a virtual one. Being part of a VT has not changed a lot as he is still working as usual. The difference is that he does not go to the office anymore, he sits at home the whole days, he declares.

When working in a VT Alex believes that it is very important that you are responsible and understand work duties must be finished regardless of whether the superior is beside you or not. He mentions that if someone does not take responsibility regarding working tasks, people will soon notice as they have much communication with a lot of different stakeholders. Hence, feedback will come pretty fast if not answering these on time.

Alex and Alpha Team now have 'daily-check-ins' in the afternoon where they meet to see if everyone is doing fine and to check if everyone is motivated to do their tasks, these meetings they normally do not engage in. His concerns are thus that some might think that this is done only to control that people are working, but for him, this has not been any problem, he thinks that it is working well. When it comes to communication in a VT, Alex does not think it is harder now to understand people if they send out a message, he knows his team well and has worked with them for a long time, therefore, he also knows when there is irony going on. He says that this could be hard if not knowing the people, and not seeing their body language, often people appear 'harder' when writing a message.

Alex thinks it is important to take responsibility and to understand that it is the same for everyone. He says: "*if everyone would start to cheat it would go even more to hell*", he thinks it is important to keep the motivation high even though it is hard, this he explains being the most difficult part when working from home.

Leadership in VTs

The democratic leadership style is what Alex prefers. For him it is important that everyone has a say within a team, everyone should feel free to speak and take place. He mentions that people are different, and some have more drive and takes more space than others, as there can be people in need of more guidance. He says that there exist informal leaders within a group, those who take initiative, have opinions, and comes with constructive ideas. Then there are also people being more in the background, just wanting to do their tasks and those being more cautious.

Leadership in his team is practiced through listening and giving out information. It is done by trying to make everyone understand what needs to be done. Alex has a feeling that Anna always is double-checking that everyone has understood their task, and especially now under these particular circumstances. However, he does not feel that there is any extra effort from the leader trying to motivate. He feels that more information is about the importance to keep delivering and working as usual. Thus, Alex imagines that it is hard to motivate in other ways than just trying to communicate as much as possible and be transparent towards everyone. His superior tells them what is happening and what the plan is and so on.

Challenges & possibilities

Instead of standing up in the office and shouting “*is there anyone having time to answer a quick question?*” you now send out a message in the group on ‘Microsoft Teams’, Alex says. For him, it does not matter if there is chit-chat in the office or not, but he thinks that some might appreciate working from home now as they cannot be disturbed as much, as some might find it difficult to concentrate when people are talking.

Alex prefers to work at the office as he can be more effective, he feels that he has more steady routines throughout the day. At home he is more flexible which he thinks can be good from one point of view. He thinks that many people might feel that they are saving a lot of time not having to commute to the office and as a result are becoming more available when being able to stay at home. On the other hand, there are negative aspects as well as coming with this. Alex mentions that Alpha Team, in general, has working hours between 8 AM and 5 PM, but here he sees a potential problem if more people start working on different hours due to the availability of using flexible working hours. His concern is that; if more people might start doing other things during the daytime or that they take a longer break while others work as usual that it can become harder to get in touch with people. As it is now there has not yet been harder to set up a meeting or reach out to people he says.

To work from home is not easy, Alex says he misses the social aspect, to chitchat with his colleagues, and meet people by the coffee machine, have lunch together, he misses all of it. Hence, it feels a bit sad for Alex to not be able to meet everyone in person, but they do, however, meet in a virtual setting. When working virtually he points out that he tries to think about how he points his webcam and how he uses his body language as this is important when speaking. Some people, he says, do not turn on their webcams and as an effect, it becomes more like a

regular phone call. He thinks it is much easier to comprehend when the meeting is face-to-face. Hence, at the office it is much easier as they also have different tools available such as whiteboard and this helps when having to draw something, he claims.

ALLAN

Allan work as a data developer and his tasks are two folded. His primary task is the role of a product manager where he works with something called ‘one data platform’ which is the internal data system of the company. Here he is one of three that set the rules on how it should develop. This job takes up half of his time and always goes before the other task that he has, which is automatization of processes within data. Here his job is to make things more effective. Because of the two-folded way of working he has two different superiors, one working from Denmark and one at the office, Anna. Allan is relatively new in comparison to others within his team, he started at Alpha the previous year.

How Allan experiences VTs

Allan did not have the best start when changing to work virtually from home, his working environment was not that good as he sat with his laptop. Thus, he resolved it quickly by acquiring a well-functioning desktop and a bigger monitor. He says that things work well now.

Allan then explains that his job is from the beginning very virtual and that he works every day with the computer and has meetings about data, the only difference is that he now does not have any meetings face-to-face. Hence, the working tasks have not changed for Allan, they are pretty much the same as before changing to working virtually. What he has noticed is that the connection to people has changed a bit. Allan mentions that things have been done to keep the social contact and this through ‘virtual fika’, but this is only with people he already knows well. People he does not know as well he does not currently meet, and this is according to Allan quite sad. He explains it is fine but feels that it is not the same thing. Most of the people in the daily ‘catch-ups’ try to keep the spirit up and motivate one another.

Leadership in VTs

Allan knows that he could easily get help if he would face any problems and that makes things much easier. Allan thinks a good leader is some being present, one who leads by example and someone who supports both him and his team so that they can work as well as possible. He explains that Anna has a ‘hands-off-approach’, she does not tell him what to do and he is given

a free role. However, Allan knows that if he encounters any problem, she will always be there to support and that is perfect, he says.

Sometimes he thinks that it would have been good if someone pushed him a bit more, but that is because of his previous working experiences abroad where they had stricter deadlines and a lot of pressure from the top of the hierarchy. He says that it is important to find a balance, it cannot be too strict nor too slow. But his experience at Alpha is good and he enjoys working in Alpha Team, but sometimes things could have been pushed a bit harder.

When the team became virtual, Allan did not feel that the leadership changed noticeably compared with his normal work environment. The team leader makes her usual monthly 'catch-ups'. However, what might be lost are all unplanned meetings they sometimes have, now there is only a lot of planned time in the schedule. It might be a small change regarding Allan's superior at the office, but his other superior regarding his role as a project manager does not change at all as they normally meet virtually.

Challenges & possibilities

The good thing about working from home is that Allan is not getting disturbed by others. Before people could come and ask him if he wanted a coffee or asking other questions. But when he works with coding or similar tasks, he feels that he needs to be very concentrated. Sometimes he tries to put on headphones to give a signal that he is up to something, but that does not work every time. Even though Allan is disturbed for a few minutes, he sometimes needs to find his way back to where he was and that is very time-consuming, he says.

The most challenging part when working virtually for Allan is that he misses his colleagues, it is not that fun for him. The spontaneous situations to meet people have disappeared in a way, he cannot meet people by the coffee machine to talk about, for instance, projects. On the other hand, he feels that he has gained better contact with others. He has gained a better connection with people working abroad and he thinks this is beneficial as they now are on the 'same level', as everyone is now working virtually. He also mentions that he has gained a better connection with some of Alpha Team's members as they have 'catch-ups' every day where everyone joins in to talk. He laughs a bit when realizing that he has not talked to some of the members in his official team that much, he explains that he does not work with them that often and for that reason, it has not happened until now.

4.2 Case B

Bravo Team is a logistics and customer support department of a global manufacturing company located in southern Sweden. The team consists of 6 employees and the team leader. They are trying to decrease the spread of the virus by dividing the team into smaller units which are working virtually on different days, Bravo Team shift 3 days of working from home followed by 3 days at the office.

BIANCA

Bianca works as logistics manager and her responsibilities are to work with two different groups of people. One group is working with customers and their orders, the other group is handling stock and they have a direct manager who reports to Bianca. She has worked at Bravo for about 10 years. What Bianca needs and wants are independent people who can work autonomously and this she explains by stating that it is the most effective way of working, but also to make her employees feel active and pleased. What kind of leadership styles she uses is depending on the group, how the people are, and how circumstances are changing. She says that as a leader she needs to adapt to people and the group as these are not stable. She has no prior experience working with VTs, but what she mentions is that she has had a kind of 'training' that enable her to do so, she keeps in touch with people from around the world constantly, but these she says are small groups of people, thus not stable groups that have to work together to reach a specific type of information.

How Bianca experiences VTs

She annually has a discussion with her employees about their development and this is conducted face-to-face. However, because of the sudden covid-19 outbreak, she had not time to finish all of them. This made her carry out her first-ever virtual evaluation meeting, but before doing so, she informed that she needed to make the discussion with the web camera turned on. She had realized in previous meetings with her team that much was lost as people did not turn on their cameras. Instead, it felt more like a phone call as she could not see any nonverbal cues such as body language, which she understands helps a lot to get a feeling of personal touch. Bianca admits that it felt a bit weird the first time as she normally sees them in their typical working environment at the office.

To keep the social contact, she has introduced daily meetings where they can talk about the job but also about other things outside work. However, as they work at the office for some days a

week, she got a reminder that they had not had any 'fika' together for over a month. She explains this by mentioning that they have had much to do and this under a short period of time, they have had to be very efficient during this time. Thus, when realizing they had forgotten the 'fika' which is a relational and important thing to do, Bianca told everyone that the need to have 'fika' together even though they have to stand a bit apart.

Her experience when communicating with the team online or what she has heard and understood is, that it is somewhat unclear. An example is when people start communicating through mail, she says. Sometimes it takes more time if someone makes a silly mistake, like putting minus instead of plus, Bianca explains. Here the conversation goes on for a longer time than it would have if talked through phone or face-to-face directly, Bianca mentions. Hence, she has informed her group to use other tools than email in order to prevent these misunderstandings.

Leadership in VT

As a leader working virtually, Bianca has tried to make things as normal as possible by using alternative tools. Bravo Team has now worked with the new routines for more than a month and she explains that routines make people feel comfortable and that when people are being comfortable, energy can go down. She feels that she has to start thinking about how to handle the situation to prevent things from getting too comfortable.

Nothing is stable and one must be flexible, Bianca comments. She feels that much of her energy, energy as in time but also as in effort, is on a very high level and this has made it more difficult to lead her group which makes her group less focused on soft values. However, she feels that she now has started to accept the chaos, thus, she has started to regain some control. This control will enable her to find out how to practice leadership a bit more. However, at the end of the week, Bianca sends out emails to her group where she wishes them to have a nice weekend and in which she informs them about positive things and other fun things that they might appreciate. The situation is very uncertain, and she strives to be as open and transparent as possible about this. She tries to bring up the topic about the situation and explain what she knows and what she does not know. Bianca thinks it is very important for people to talk about these things, hence, preventing it from becoming a burden.

Challenges & possibilities

Bianca explains that the biggest challenge is how to work with soft values when engaging in VTs and that is something she still needs to improve. Another challenge for her is how to structure work. Some people might feel that it is a good combination mixing between work and non-related work tasks, as others might be more effective when having more structure and this situation she is not used to.

Bianca is very optimistic, and she understands this change from working at the office to now engaging in a VT to be something that she could take as an advantage. She mentions that she now has been able to see another side of her team members which she normally could not see and for her, this allows her to get to know the person a bit more. Another opportunity Bianca mentions is that instead of asking colleagues about resolutions of a problem this can allow people to think for themselves. Something that hopefully can enable some team members to come up with their own solutions for problems. For Bianca, this is not the most effective way of working but could make people stronger and more independent. On the other hand, she also sees a challenge when it comes to Bravo Team as a group, that might float away from each other if people start to develop in separate ways which others cannot follow, for Bianca this situation could not be good if it continues for a longer time, her concerns lie in that misunderstandings might appear within the group but also that the group's development stops.

BELLA

Bella has been at Bravo and in Bravo Team for 5 years and she has two major responsibilities, sales orders which imply, for instance, communication with customers and making sure that the orders are produced. She is also responsible for logistics which means that she is having contact with the shippers and are dealing with procurements. Bella enjoys freedom at work and does not appreciate being micromanaged. She explains that she is given developing tasks with which she can work freely. Bella believes she is quite independent, but when she needs to reach out to the team leader, she knows that she can, both if something needs to be escalated but also as a sounding board. This is important for Bella and she explains that Bianca has communicated this aspect, that she has that kind of leadership.

How Bella experiences VTs

When working from home, the lack of social interaction reduces Bella's motivation and commitment. She says that it feels like the work is on hold, that you do your day-to-day tasks,

but the upcoming and more lengthy projects suffer due to the reduced commitment. Bella explains that she normally gets plenty of energy from Bianca and now when having team meetings via 'Microsoft Teams', which are informal and contains much laughter. The team does not engage in scheduled individual meetings and did not prior to covid-19 either, if team members need help or want encouragement, they reach out themselves, something Bella experiences that she can do when needed.

Bella mentions that a positive aspect of engaging in VTs is that the number of meetings is reduced, earlier she felt that it was too many of them and that she was not sure why she was attending some of them or if she could add something to them. Other meetings were less efficient. Now the meetings are only being held when needed and they are quicker and more efficient. However, even if the meetings are fewer and the meeting's efficiency is increasing, she misses the social aspects and gets lonely at home.

Bella recently had her birthday and was celebrated with songs through 'Microsoft Teams' which she says was a very funny experience. At the office, her colleagues have put up pictures of themselves on their chairs, making the sole workers feeling less lonely. She says that in these ways they are trying to keep the faith. Bella states that many ideas are created at the coffee machine and that a lot of issues are solved in this informal way. This is something that currently is absent.

The working environment at home is acceptable according to Bella, she does not have the ergonomic tools she uses at the office and is placing her laptop on kid's puzzle boxes when she wants to work standing.

Leadership in VTs

Bella states that the Bravo Team's independence is affected by going online, when the team was co-located it felt easier for her to talk with Bianca regarding minor issues. Now she experiences that some of those issues feel too small for calling or sending e-mails about, thus, she tries to solve more of them herself at the moment. Bella also sees some positive aspects with this way of working because some of the team members will learn to take more responsibility. However, she also experiences that the feeling of belonging suffers when working like this. Bella says that the uncertainty in the situation has not been addressed within the group and that she just has started to think about those issues herself.

Bravo's CEO communicates official information and encourages worried employees to contact their closest superior. Bella feels that she can do this if needed, however, she also stresses that those issues might be something she wants to talk informally about at the coffee machine or before a meeting starts and that they are not something she fancies talking about through virtual tools.

If the current work mode continues, Bella says that she has to establish more deadlines and report to herself. Normally she sets her own deadlines, however, she would appreciate if Bianca was more involved in these parts at the moment.

Challenges & possibilities

Bella says that on special occasions, team members are allowed to work from home. Something that she experienced positively, that she could focus the tasks without interruptions. Now, however, she misses the social aspect of working at the office. The days she spends at the office she only meets three other persons; the social interactions are very limited and there is no one to talk to at the coffee machine anymore. She says that the energy gained from such informal interactions have disappeared completely due to the new work arrangements.

Bella believes that the Bravo Team might be more virtual in the future and that it is a good thing that all team members now are learning, she has noticed an increased technical competence in the team. She explains that this can lead to less traveling in the future if more meetings can be held virtually.

Motivation and commitment are the biggest challenges for Bella in a virtual setting, she states that she misses the regular pace at work. Now things are slow and quiet which forces her to drag herself over motivational obstacles. The technical aspects are fine, all systems and software work perfectly at home. Bella thinks one has to be a loner and able to motivate oneself to succeed in working virtually. She states that she now misses the persons interrupting her at work.

BILLY

Billy works at customer support and logistics; he has a lot of contact with customers and is planning the shipments. He was employed by Bravo two and a half years ago and has been working in Bravo Team ever since. Billy believes that he is fairly independent normally, he has customers he is responsible for, and that has not changed due to the current circumstances.

How Billy experiences VTs

Billy has no prior experience with VTs and he believes it works better than he ever could have imagined. He does not experience any major changes when engaging in VTs, he still does the same tasks and most of them can be executed from home in the same way as at the office. Billy explains that the difference lies in getting assistance with his tasks, that has changed when working from home as he cannot get directions in the way he is used to.

Billy says he is happy with the leadership at the moment and was placed in the same team as Bianca when Bravo Team was divided in order to decrease the spread of the virus. The days he is at the office he asks Bianca for help and assistance as usual but the days he spends at home are more troublesome as he cannot get help in the same way as he is used to. Billy explains that he, of course, can call or email her but he knows that she has plenty of tasks and accepts the delayed answers, however, he always gets answers the same day which he explains are perfectly fine. He continues and says that the situation works fine, and the difference is not that big that it affects him significantly.

Billy says that he might have more responsibilities now when working virtually. As some of his customers cannot provide information whether they are open or closed he must have constant contact with them for not sending shipments to closed plants.

One day when Billy got to the workplace to work alone in the shared office, he saw pictures of his colleagues' faces on their chairs. He took a picture of himself which he printed and put on his chair as well, so his colleagues can feel his presence and surveillance, he says and laughs.

Leadership in VTs

Billy states that the leadership is excellent within the team, with or without the covid-19 situation and with or without working virtually. Billy cannot imagine a better superior than Bianca, who he says is the reason for the team's success. Billy believes that the leadership significantly impacts him when he encounters complex problems, then he always asks Bianca for directions, who provides him with constructive feedback regarding what Billy should do and how he should do it. Billy says: *"I follow the instructions and think it works perfectly fine"*.

Billy does not experience that he gets more support or that the leadership has changed when the team went online, he says that support is the same as before and that it is very good. The support

he receives is not impacted by working virtually and Billy states that Bianca is always doing a brilliant job for the team.

Billy explains that there have been several meetings concerning how the situation is to be handled, how workloads are to be distributed, and how the team should act. He had some worries at first but since everything has turned out nicely, he believes that it has been managed very well.

Challenges & possibilities

Billy stresses that his motivation suffers the days he works from home. He misses his team and his regular working environment. He gets distracted when working from home and sometimes experiences that he does not know if he can take an extra coffee break or should sit and wait for an email. Billy gets interrupted by others in his home and says that discipline is the hardest part of working from home. When working from home, Billy has a hard time separating work from rest. His home is where he rests and when he now has to work from home, he gets an odd feeling.

Billy says that his work tasks take longer to finish from home due to the fact that he works on a laptop and that the system he works with sometimes encounters problems as it is not connected to the server. Billy gets very frustrated and stressed when he cannot do his tasks due to technical issues. Working virtually and having meetings through, for instance, 'Microsoft Teams' is not that different from having the meetings face-to-face according to Billy as everyone can express what they wish to express. He does not experience many disadvantages except that he misses his team. He believes that he now has the chance to get to know others that he normally does not work as close to, which he sees as an advantage.

The communication is as good in a virtual setting as in a co-located one in Billy's opinion and he does not see any virtual challenges. He explains that communication always is double-checked and therefore are many potential problems prevented. The technical aspects of the work mode are the problem for Billy.

4.3 Case C

Charlie Team is located in southern Sweden and consists of 12 team members that are designing and constructing different parts of buildings and stations equipped with electronic parts, products that are placed next to, for instance, railroads or windmills. The team members work

independently and are accountable for the delivery of their tasks. Charlie Team has recently implemented daily rotations; thus, half of the workforce is present at the company site whereas the other half works from home until the situation that covid-19 brought is resolved.

CARL

Carl is product development manager at Charlie's construction department and has for 10 years been in his position. He says that he is a leader within a knowledge-intensive organization which results in that he has to match his leadership accordingly. Charlie Team operates freely with responsibilities where everyone is accountable for what they deliver. Therefore, Carl is not micromanaging anyone in the team who all are expected to be competent enough to know what they are supposed to do. He says that humility and coaching are key in this kind of team, to support team members in need without telling them how to solve their problem. Carl explains that some need more support than others and that he cannot get too involved as that would imply that he would become accountable for the delivery, something not to strive for according to Carl as the team members possess specialized knowledge for design and construction that he does not. Carl explains that if you assist team members too much, they will never learn and always ask for help before they try to solve problems themselves. This is something that prevents personal developments, Carl says, and adds that it would be impossible for him to handle his managerial tasks if he had to show team members where to drill holes in product components.

How Carl experiences VTs

Since Charlie Team engages in design and construction, everyone cannot work from home, hence, some have to be on the site to handle upcoming difficulties. *"The buildings are custom made; it is not like assembling 20.000 toasters"*. Therefore, Charlie Team decided to introduce daily rotations to keep production going. He says that it works very well, however, what he has noticed is that many get restless and bored when working from home. Carl states that he gets twice as tired the days he works from home. Even though Carl says that he is old and uninterested in IT systems, he still experiences that things have turned out better than he ever could have thought.

Carl explains that the lack of social interaction makes the team members video call each other in attempts to get the input they normally obtain at the workplace and sing birthday songs through software such as 'Zoom'. Carl says that the lack of social interaction is what affects the

team the most and that one team member has almost become insane working from home during a long period before the daily rotations were implemented. He believes that such a setup is preferable over working from home for too long.

Furthermore, Carl explains that Charlie is accountable for the working environment when employees are working from home who can collect chairs and screens from the office. However, he recognizes the difficulties in controlling that employees' working environment is acceptable. Carl states that one must be pragmatic in these matters and that the employees are senior enough to let him know if they miss something that can improve their work environment.

Leadership in VTs

Carl has not experienced any major differences working virtually, however, he knows that he has to meet the team members regularly. Since the team went virtual, the communication has increased, and he says that he might have become more social even though he is at the workplace less often than before. When working from home, Carl calls his team members and ensures that they are fine and not having breakdowns at home. Conversely, Carl knows that the team members come to him if they want something when working at the office. Carl says that he has talked with some team members about the importance of work-life balance and urged them to remember clocking out when the workday is over.

Charlie Team's independence has not been affected much and normally Carl does not have to interfere with their tasks, however, the team might have become even more independent since going online, Carl says. He explains that informal conversations at the office probably are preferred over calling about small issues. He elaborates: *"It worked well before and it works well now, however, how things are working in the long-run has to be reviewed when things return to normal"*.

He explains that it is important to handle the crisis seriously and refer to the public health agency to respond to any questions from the team members. He says that Charlie has shown that they are serious when dealing with the matter. Additionally, all team members did not have laptops before the crisis started, something that was provided to everyone rather quickly.

Challenges & possibilities

Carl explains that the Charlie Team's weekly meetings, as well as other meetings, are now being held in 'Team Viewer', something that works well and that he believes will drive the

development forward. Carl thinks that the management team may keep having meetings through the aforementioned software and not return to traditional face-to-face meetings. This is something that will improve efficiency as people will not have to travel to the management meetings.

The number of meetings would then be reduced, he says, something that would improve the efficiency since it is often too many of them. Carl adds that the meetings themselves also become more efficient as silence is very noticeable in a virtual meeting. Regular meetings take much longer as social conversations delay the closing of those meetings, something that he has not seen occurring in a virtual setting.

Carl sees advantages as everyone improves their technical skills now when they are forced to use programs that are new for some and says that his attitude towards IT has changed remarkably. Now he can appreciate the advantages and believes that it is very useful. Carl also believes that it is likely that the team will work more virtually in the future.

When communicating through e-mail, there is a high frequency of mistakes as people sometimes cannot express themselves clearly. Communicating through video software is not as likely to result in misunderstandings as you get the cues needed to realize if you have been understood or not, according to Carl.

Carl says that other teams probably face more challenges than Charlie Team as its members are independent and skilled in computers. However, something that has to be considered when working from home is to keep the work-life balance as it can be experienced as not leaving work when working from home.

CARINA

Carina is a design engineer working with product development and product design. She has been within the team since she started working for Charlie one and a half years ago. Carina would prefer to rotate every other week instead of the daily rotations, but she also recognizes that if something goes wrong, the factory workers must be able to contact the one who designed what they are assembling. In that regard, daily rotations are preferable. So far, Carina believes that the setup is satisfactory. Leadership for Carina is about organizing and leading a team in a way that keeps motivation and efficiency high, being present, and building relations. For Carina, leaders should not control but provide support if needed. Moral dilemmas and times of

crisis are examples of when she thinks leadership makes a difference, where leaders step in assists in decision-making.

How Carina experiences VTs

Carina says that her work-life has not changed a lot, however, she prefers working at the office rather than from home since, at the office, there is always something to do. Working from home, she brings with her the tasks she regularly conducts but once those are completed, she cannot go out to the workshop and find new ones as she would have done normally.

She explains that she is independent at work but everyone at in Charlie Team uses to discuss ideas since everyone is not specialized in everything, something that has been affected by the ongoing situation, that they now have to call each other more often *“I believe that help would come faster since it is easier if someone can show you on the computer than trying to communicate over the phone”*.

Carina has also noticed that the team members working at the site the days she is at home, do not call her for technical advice even if needed since they prefer to discuss the issue face-to-face. Therefore, they wait with their problems until she is back at the office, unless critical matters occur, which results in that she can have an overwhelming number of problems to solve after one day.

Carina experiences more disadvantages than advantages when working virtually, working from home makes her put in more effort in her ‘normal’ working tasks as social interaction do not disturb the efficiency. There are no joking or discussions of current events when working virtually, Carina says.

She explains that she does not need the social interaction workplaces might offer, however, she misses the possibility to spontaneously discuss ideas with others instead of calling them and hoping for them to be available. She explains that working from home limits her as she cannot enter the workshop and search for improvements.

Motivation in a virtual setting is the same whether working at the office or home, according to Carina, who now is looking forward to the next tasks since she has less to do. She says: *“It’s almost as you get happy when someone calls and tells you that they need help”*.

Leadership in VTs

According to Carina has the leadership not changed when engaging in virtual work modes, however, more responsibility is shown considering issues connected with the pandemic such as hygiene and physical proximity the days she works at the office. Carina explains that team members are led in similar ways, however, compromises are made if necessary such as one of her colleagues who had difficulties working from home due to technical limitations, was allowed to keep working at the office despite the new rotation arrangements.

The communication is the same as before the team became virtual, she explains that it is mainly through email and telephone. She experiences no problems and explains that the use of these communications means have increased when she works at the office in attempts to reduce the spread of the virus, as they minimize the proximal interactions.

The uncertainty in the situation is not addressed within the team, however, the current arrangements are working well, and communication is clear within the team. Carina experiences support from Carl who is aware that tasks take longer to complete.

Challenges & possibilities

Carina explains that when she works from home, she is connected to a server located far away that reduces the pace of her completing her tasks. Furthermore, she says that if someone needs assistance at the site, she is contacted through video-mediated tools and has to struggle to see what is going on in the workshop through a blurry screen. This can concern components that do not fit or there might be measurement errors. She describes the situation: *“Since I design the component, I want to measure it, because we measure differently”*. Carina states that these kinds of issues are hard to handle virtually, however, most of the work she does on her computer is going well, just a bit slower.

Carina explains that the working environment is fine when working from home as team members are allowed to collect screens and chairs for home use during this period. She states that for handling these kinds of situations in the future, companies must be able to arrange ergonomic working environments and to oversee employees' independence in order to perform highly when having to work virtually.

Carina says that when working virtually, there might be an overreliance in software that might cause harm such as encryption issues with, for instance, the videoconferencing tool 'Zoom'.

Something that made Charlie forbid the use of the software for screen sharing of working tasks. IT security is something that has to be considered when working like this, she concludes.

CHRIS

Chris is a design engineer responsible for all the low voltage products that Charlie Team produces, both existing ones and the development of new ones. Chris has been in working at Charlie since 2007, in Charlie Team since 2008 and his current position has he held for 1.5 years. Leadership for Chris is the ability to motivate employees and provide developmental opportunities. He says that his degree of independence is very high and that suits him well. Chris explains: *“I know what to do when I work, it is like a referee in hockey, a good referee isn’t noticed even though he is there”*. At Charlie Team they have department meetings, however, Chris plans his work and the leadership is not that apparent but provided if needed, he says. Recognition and praise are also given which enhances motivation.

How Chris experiences VTs

Chris says that he has no prior experience with VTs and believes that it works very well. He has noticed that there is more to do at the workplace than at home and that priorities are different depending on from where he operates.

The social distancing has impacted the feeling of belonging as the relations cannot be the same anymore, Chris explains, the days he is at work he no longer has lunch breaks or ‘fikas’ with colleagues, instead, he eats in his office to which he has brought a microwave. Chris misses the social interaction he uses to experience at the workplace and he sometimes gets bored with the current arrangement. Chris explains that Charlie Team tries to keep in touch as they have ‘virtual fikas’ through videoconferencing software. However, the everyday spontaneity is lost, he says. Conversely, he saves a significant amount of time not having to drive to the workplace.

Working from home can, however, be more efficient and more gets done as you do not have the noise and running around, according to Chris, who at the same time recognize that this role includes being available. He explains the problem in this balance: *“I get more done working from home, however, the production loses the support I am supposed to provide”*. Additionally, the reduced number of emails is increasing efficiency as the team now more frequently communicates through videoconferencing tools, Chris says.

Leadership in VTs

On the question of how leadership is practiced in a virtual setting, Chris replies: *“To be honest, there is no difference, it hasn’t become better or worse”*. He experiences no problems and knows that he can contact the team leader whenever he needs to. The leadership aspect is not as important as the social one, Chris says. His social interactions are now slim to none and he spends most of his time at the computer, something that makes him feel a bit down. The borderlines between spare time and working hours get blurred, which he notices when he does household chores during working hours as well as work tasks after clocking out. Chris says that he enjoys his job and therefore it has not yet become an issue, however, there might be a limit he has not reached yet.

Work-life is free at Charlie Team and no one is controlling what they are doing, however, when the team went online it became even more evident that you are accountable for your tasks, Chris says. He is the most motivated and efficient when he almost has too much to do. His motivation is reduced when he has too little to do. He explains that the team was informed by Carl regarding how the pandemic was to be handled by Charlie before it was communicated to all departments, something he appreciates.

Challenges & possibilities

The working environment is fine according to Chris, who only has noticed that the screens are somewhat better at the office as well as the ventilation. Chris says that technical issues such as internet speed are a major challenge when working from home, in some cases can the speed be significantly slower. However, he recognizes that the technical competencies increase and new solutions arise, which will be beneficial for the future.

For virtual meetings with several participants, the lack of eye contact is a problem despite that the cameras are rolling according to Chris who experiences that people are talking over or are interrupting each other. Chris also sees advantages regarding meetings as he does not have to listen to all it and instead can work on his tasks or make a phone call when some, for him, irrelevant points are discussed. He says: *“The attitude towards meetings is probably better online compared within a conference room”*. Additionally, scheduled virtual meetings both start and ends on time, according to Chris.

“Personally, I believe that even when the corona crisis ends, we will work in totally different ways. I see the advantages of working from home on some occasions, this saves time and the environment”.

Chris states that team members who have difficulties working independently can get a good experience from this working arrangement as they are forced to be more independent and take more responsibility. He believes that team members come across minor issues, they are more likely to solve them themselves than asking for help at an early point.

5. DISCUSSION

5.1 The importance of spontaneous informal interactions

Communication changes within the team

The means of communication unavoidably changed as the previously co-located teams were geographically dispersed and became VTs. Both spontaneously and planned face-to-face interactions vanished and was replaced by computer-mediated communication through, for example, emails and video calls. However, this was nothing new for the participants who already were utilizing these virtual tools in their everyday work. For instance, in Case A they had already implemented the use of 'Microsoft Teams' for the last six months. The extent of its use was, however, new to most of the participants. Previously it had been used as a complement to the everyday interactions at the office as suggested by Bell and Kozlowski (2002), and now it became their only means of communication.

In Case A, daily 'check-ins' was applied in order to ensure the well-being of the team members through video calls. This could also be seen in Case C in which Carl reached out to his members and became more social than normally. In Case B, Bianca tried to keep things as normal as possible and have social chats through video calls. A virtual environment without well-established methods calls for a high degree of adaptivity (Duarte and Snyder, 2006; Bell and Kozlowski, 2002). This suggests an adaptivity that can be found in the situational approach of leadership as discussed by Northouse (2013) since leadership is adjusted after the situation at hand. Additionally, Goleman (2000) argued that being able to adopt different leadership styles results in success. We interpret this 'leader adaptivity' as a way to maintain work relations with followers as well as their well-being, something that seems to be of high importance under these circumstances as seen in the statements by Alex, Bella, and Billy who felt less motivated working from home. Consequently, adaptive leadership efforts seem to be useful. However, the design engineers in Case C explained that they are motivated by having tasks to do and did not seem to be as impacted by leadership as the other cases. This might be a result of their daily rotations or the highly independent nature of their work. Therefore, the benefit of adapting leadership styles according to the situation at hand seems to relate to the independence of followers. However, if followers are independent and not reaching out to their leaders as it is not necessary, then there is no leader-follower relation according to Blom and Alvesson (2014). Leadership is something that occurs in a relational process where followers are key (Alvesson,

2019). Thus, if followers are reaching out to their leaders where they need support or other kinds of advice, then there is an interaction that enables leadership to transform into something that fits the situation at hand. Nevertheless, the change of environment into a virtual one has although made it more difficult to spontaneously interact with both leaders and team members which correspond to what Malhotra et al. (2007) claims about virtual leaders and their difficulties working in a virtual environment.

Not addressing sensitive matters

When the means of communication is altered, leaders and followers encounter relational implications. The data shows a general agreement that previously co-located teams becoming VTs face challenges as the benefits gained from spontaneously informal interactions are lost. This affects leader-follower work relations in several ways. For instance, Anna stated that sensitive matters are not to be discussed through virtual tools since it becomes too impersonal and Alice mentioned that it is easier to put on a smile during virtual meetings than to hide feelings for a full day at the office. In Case B, Bella explained that she prefers to address these kinds of issues face-to-face informally while Bianca said that it is difficult to lead during these circumstances and that Bravo Team has become more task orientated as a consequence of moving online. Something that relates to Gibson and Gibbs (2006) who stated that, for instance, the emotional intensity of interactions among individuals affects the strength of relationships. Which according to Pauleen and Yoong, (2001) is a vital concern for VT's communication to be successful. This indicates that the emotional intensity of communication in VTs might decrease since it is perceived not to be suitable to address sensitive matters through virtual tools. Consequently, communication might become more task orientated in a virtual setting as was suggested by Saunders and Ahuja (2006) which affects the emotional intensity of relationships, something that seems to potentially have negative impacts for both Case A and B.

Decreased knowledge sharing

The change in communication and interactions also has implications for knowledge sharing for several of the participants. Spontaneous social interactions were explained to enable knowledge sharing (Morgan et al., 2014) and collaboration within teams (Pauleen and Yoong, 2001). The loss of spontaneous informal interactions affected the knowledge sharing among team members in the studied cases. Alice, Allan, and Carina mentioned that knowledge sharing suffers when engaging in virtual work modes since spontaneously and informal conversations enable this when working co-located. Allan said that projects are discussed at the coffee machine and Bella

explained that ideas are created, and problems are solved there in an informal way. Now, several of the participants state that they are becoming more independent and have to find answers themselves. This corresponds with the statements by Breu and Hemingway (2004), that VTs are facing decreased knowledge sharing. Becoming a VT, and the reduced knowledge sharing that may follow might pose obstacles in leader-follower work relations in the long run as followers lose the benefits gained from such interactions. Some participants also stated that they became less prone to reaching out to their leader about minor issues. This can indicate that minor issues are not addressed, and spontaneous knowledge sharing is prevented when entering a virtual setting.

However, the loss of spontaneity is not inherently negative as could be seen in the statements by Allan, Carina, and Chris who experienced that they could focus better on their tasks at home due to fewer interruptions as they normally come across at the workplace. These participants were, nevertheless, identified as the most independent ones.

Turn on the camera

Alice explained that communication in VTs must be clear and confirmed to limit the number of misunderstandings. She mentioned that by having the web camera turned on during virtual meetings, communication could be confirmed since she was able to gain more nonverbal cues than during a phone call or virtual meeting in which participants chose not to have the camera turned on. Alex stated that he points his web camera in a direction that enables others to pick up his body language during virtual meetings. Bianca argued that nuances were lost if not using the web camera during this kind of meeting. This corresponds with Morgan et al. (2014) who stated that asynchronous impersonal communication and a lack of nonverbal cues may generate misinterpretations and misunderstandings. We interpret that there are several reasons why it is important to have the camera turned on during virtual meetings. The nonverbal cues gained from such communication enable participants to confirm that what was said also was understood and it is also likely that participants are able to observe more nuances that can make these meetings more relaxed. Billy stated that communication always is double-checked which prevents misunderstandings and Alex mentioned that Anna now is double-checking that everyone understands their tasks. This refers to closed-loop communication explained by Marlow et al. (2017) and seems to be important when entering virtual work modes to prevent misunderstandings.

Moreover, the use of asynchronous means of communication such as email cause problems since it entails more misunderstandings than communication through video tools as could be seen in the statements of Bianca and Carl. However, Alex mentioned that he knows his team well and can read between the lines and realize when irony is occurring in emails as well as face-to-face. That goes in line with the claims by Marlow et al. (2017), that the better team members know each other, the better can they handle changes in communication. Since the teams studied already existed prior to the virtual transition, it is likely that they can communicate well as long as communication is synchronous. However, even though someone is using closed-loop communication or know the other party well, it does not necessarily mean that everyone understands what was said. Hence, as it can be easy to hide your feelings under a conversation through virtual tools, it might also be easy to do the same when it comes to confirming that the task is understood. However, as the teams studied already are independent, this might not apply to them. Email conversations, however, include the same risk for misunderstandings regardless of work mode.

5.2 Followers' responsibilities

Proactive followers

When co-located teams went online, data shows that some have taken the initiative to remind the leaders about the importance of the social aspect within the teams. At first, Case A only had the daily video calls three times a week, but by providing Anna with the input they now have them on a daily basis as these were important for Alpha Team when everything got lonelier. At these meetings, people motivate one another and try to keep the spirit up. Bianca also received input concerning the importance of 'fika', something she had forgotten about but she soon came to understand the importance of sharing those moments within Bravo Team. This can be related to 'proactive followers', those who bring new ideas and are sharing concerns (Carsten et al. 2010). A leader that shows openness can affect attitudes and emotions within a group (Kelley and Kelloway, 2012). Leaders have much to consider, especially during times of crisis. Then, if followers are being proactive, they can impact how things turn out, as when they start sharing their concerns and ideas with the leader. Proactive followers might challenge their leaders by telling them indirectly why something is important under these circumstances, by suggesting what is important for them. Therefore, when these thoughts are shared, there are follower-leader interactions that could have an impact on leadership and how it is constructed. This goes with

that leaders and followers together construct leadership (Alvesson et al., 2019), there need to be interactions going on to make the leader understand what is important in different situations.

The importance of follower well-being

Our data demonstrated that the uncertain situation has impacted the leader's behavior towards a more supportive one. All of them exhibited an openness towards worried people, they paid attention to these matters and asked for this kind of input to be shared. For example, Anna explained that she had thought about how people felt when they were at home as she knew that the new situation potentially could bring anxiety as there are no policies. She has then tried to be as transparent as possible and has realized that she has become more supportive and coaching. In Case B, Bianca mentioned that she had addressed the uncertain situation because the burden should not be dealt with alone. Then in Case C, Carl has experienced that people could feel a lot of pressure and therefore he started reaching out to ensure that everyone is doing fine, and to prevent potential breakdowns. These findings relate to the situational approach of leadership and especially to the supportive style that Northouse (2013) explains are leaders who, for example, are listening and asking for input. Furthermore, the 'affiliative style' by Goleman (2000) is also present as the focus is on the well-being of people. The crisis brought upon us is unprecedented and brings uncertainty, for both leaders and followers. However, all of the participating leaders (Anna, Bianca, and Carl) have shown that they care about follower well-being and have adapted to the situation. They have been listening to concerns from people who have needed it but have also taken the responsibility to address the matter because they have paid attention to followers' feelings and emotions. According to Duarte and Snyder (2006) can an environment cause uncertainty and be emotional for those within it, thus virtual leaders should adapt to the situation, and this is something they all have displayed. Additionally, this demonstrates how leaders and followers co-produce leadership in interactions with each other and that leadership is vital in these uncertain times.

However, followers need to be proactive in order for leaders to understand how to adapt, and especially when working at a distance. Hence, virtual leaders can find it challenging to know when social interactions are needed as they are not physically present (Malhotra et al., 2007), indicating that, if someone is not present it can be a risk that leaders only estimate what is needed if not getting any real input. This is something that goes with Byrd's (2019) claims, that it will be harder to read cues and body language as it will be to get in-depth understandings when only interacting virtually. If solely having passive followers, followers that do what

leaders tell them to do (Carsten et al., 2010), then it can become a risk that one can go back to the view of leadership where leaders lead (subject) and followers follow (object), as described by Alvesson et al., (2017). Again, this should not be understood as leadership, as it is more associated with management. However, followers should try to take a proactive role and this to be able to influence their own well-being, which some of them did. Hence, the interactions between leader and follower are very important to maintain even though the reality has changed, where they together face many difficulties and challenges on the way. Furthermore, why this affiliative/supportive style may have appeared among the leaders could be of their own uncertain situation, they could only be as transparent as possible, indicating that they do not know what will happen if looking further ahead. If they feel this themselves, they can imagine how others feel and therefore pay attention to feelings and others' well-being.

5.3 Autonomy

Increased independence

Suddenly becoming a VT in times of crisis also affects leader-follower work relations in that regard that followers become more independent. Data displayed a common understanding that the teams' independence was increasing, even in already highly independent R&D teams such as Case C in which Chris explained that their independence became very evident when engaging in virtual work modes as the tasks had to be finished. This entailed diverging views as both Bianca and Bella in Case B along with Carl and Chris in Case C expressed that the increased independence had positive impacts since the team members became stronger and more capable as they have to find answers for themselves. The nature of VTs was described to entail a limited amount of social interactions (Saunders and Ahuja, 2006; Daim et al., 2012). Something that we interpret as a demand for increased follower independence in leader-follower work relations. However, all cases demonstrated some independence prior to becoming a VT. On the other hand, Alice and Bella felt that they burden others if reaching out regarding minor issues, something that prevented them from doing it, and instead they now are looking for the answers themselves, reducing the interactions with the respective leader. Thus, this further demonstrates that the new environment has some constraints when it comes to the possibility to socially interact with others, which increases followers' independence. Hence, the geographical dispersion makes people more aware of their own questions and thoughts and this corresponds with Marlow et al., (2017) who claim that real-time communication can be limited within a

virtual team. Then, if the communication is limited it can affect the relationship, as followers need to take more responsibility, thus becoming more independent.

However, Anna stated that she receives more questions than ever, concerning matters she never had to deal with earlier, matters that she knows that the team members can solve themselves and that it might be explained by the loss of social interaction. This indicates that within the same team (Case A) there are different understandings of whether people are becoming more independent or not, both realities are real since it is their subjective understandings of the situation. Thus, this can be linked to that people are in a constant flow of change and a leader should try to adapt the directive and supportive behavior depending on the needs of the follower as skill and motivation changes (Northouse, 2013). The role that Anna seems to take here is the coaching style, which implies that directive and supportive behavior scores high (Northouse, 2013). The reason for this to be associated with the coaching style is because she both is guiding people, as well as understands that questions asked might be because of other reasons, that they are in need of support too. Consequently, whether people are becoming more independent because of the virtual environment or start to ask for more guidance, it will have an impact on the leader-follower work relations, thus on the leadership style.

Alex mentioned that delay in communication might become a problem when engaging in virtual work modes, something that Billy already had experienced since when working virtually, as he more often had to wait for instructions. This relates to Zigurs' (2003) dimension of temporal dispersion. Temporal dispersion was suggested to decrease VTs' problem-solving abilities (O'Leary and Cummings, 2007). Here we identify a link to management, leaders must create infrastructures (Bell and Kozlowski, 2002). The teams were not dispersed across time zones as VTs can be, however, delays in answers can still pose obstacles if not addressed. Malhotra et al. (2007) suggested that norms must be enforced in a virtual setting, we believe that it is important to establish communication norms regarding acceptable delays in communication when working virtually. However, team members' independence may increase if having to find the answers themselves as suggested by data. We believe that it is a balance to it and that the one does not exclude the other.

Decreased motivation

Data displayed a common understanding among the participants that they miss their workplace and colleagues. The loss of social input gained from the workplace reduced commitment and motivation for several followers. Furthermore, Allan and Bella stated that they would enjoy

more spurring from the leader as they have to self-motivate themselves at the moment. Anna explained that the extraordinary situation brought her huge challenges as there are no policies. Bianca experienced that Bravo Team had become more task orientated during the transition and that there had not been much time for her to practice leadership yet. This goes in line with Kuscü and Arslan's (2016) statement that it is difficult to motivate members of VTs due to the nature of virtual environments. Malhotra et al. (2007) claimed that the lack of physical presence limits virtual leaders' chances of understanding what team members need. Billy said that leadership is practiced very well both in co-located and virtual work modes. Nevertheless, he faced motivational problems. Allan was happy with his free role and appreciated the leadership, still, he had to motivate himself. This indicates that leadership is not practiced in the same ways as when the teams are co-located, and motivational efforts are needed. This might be a result of the ongoing crisis, that leaders are facing an exceptional situation for which there are no manuals. Alice explained that the current leadership concerns facilitation and structuring which corresponds with some of Northouse's (2013) characteristics for management. As a result, it seems likely that management is practiced more extensively in the early phase of the transition of becoming a VT. Bell and Kozlowski (2002) argued that virtual leaders have to create infrastructures that enable assignment allocation, information sharing, planning, etc., which also relates to management. Therefore, leadership might have to wait until such managerial practices have been properly established and the transition can enter another, more relational, phase. This clearly affects the team members' motivation in Case A and B, however, for a period of time.

In Case C, however, motivation depended on having a sufficient workload which was decreased when working from home as some tasks had to be dealt with face-to-face due to the high degree of informational value as discussed by Kirkman and Mathieu (2005). Here, team members were able to self-motivate themselves and without the need for leadership interventions. This is in line with the pace-setting leadership style described by Goleman (2000), a style that also often, as a coincidence, is found in R&D units. This indicates that motivational efforts through leadership interventions are of higher importance in teams with a lower degree of self-motivation.

Leadership or management?

Our data show that the transition during a crisis when becoming a VT has led to more engagement in management than in leadership. Leadership is socially constructed in a process

(Uhl-Bien, 2006), and is associated with feelings, motivations, and values (Alvesson et al., 2017). In Case A there are now only planned meetings that have impacted the possibility to have informal conversations and Anna declared that the virtual setting is not suitable for sensitive discussions. To plan and organize is to practice management (Alvesson et al., 2017). In this way, it has become harder for reaching out and work with feelings even though this is something she tries to bring up during these scheduled meetings. Hence, our data suggest that management is more obvious than leadership, as leadership seems hard to practice in the early phase of previously co-located teams transitioning into VTs. This can also be noticed in Case B, where Bianca mentions that the transition has made her forget to be a leader. The chaos has been tough, and she needed to take control before even thinking about leading the group, which she was able to do before the transition. Control and structure are management (Northouse, 2013), and here it becomes evident that management has taken a bigger part, at least at the beginning of this transition, working as a VT. Hence, the focus has been to understand the situation and taking back control.

Then, in Case C, the transition into a virtual work mode with daily rotations has been smooth. Carl's explained that his duties are more of a managerial kind where he talks about efficiency and that his team may have advantages working in this virtual environment as they are independent and very competent in computers. However, there is an indication that Carl now pays more attention to team members' feelings as he knows that being alone can lower the well-being of a person. The delegating approach has both low support and directive behavior (Northouse, 2013), and it suits subordinates that are being self-motivated, shows a high degree of competence, with limited needs of directions, and who often works in R&D departments (Goleman, 2000). Management is what he does as his team is highly competent and in little need of guidance, however, it seems that he has started to practice leadership as there have been more interactions between them, where the need for support to maintain well-being has been important. Taken all together, data indicates that the crisis made leaders focus on management at first, as control and structure needs to be settle before focusing on feelings, well-being, etc., this corresponds with Bell and Kozlowski (2002) who states that virtual team leaders must create infrastructures that facilitate the business as a whole.

5.4 Challenges and opportunities in a virtual environment

Previous research identified several challenges for VTs which was discussed in section 2.3.3. However, those were specific to either teams already operating in virtual settings or individuals

unknown to each other that was gathered in VTs. For instance, the lack of social interaction among team members is a challenge for VTs (Chinowsky and Rojas, 2003; Daim et al., 2012; Dulebohn and Hoch, 2017). According to data does this apply to previously co-located teams moving online in times of crisis as well, which was discussed in section 5.1. Having conducted this study, we can add additional challenges as well as opportunities that apply to previously co-located teams becoming VTs in times of crisis, taking the transitional aspect into consideration. However, those are specific to the cases studied and their circumstances. They are not intended to generalize for all previously co-located teams moving online in times of crisis.

Work-life balance

Billy stated that he got an odd feeling working from home since home is rest and office is work for him, which now was hard to separate. Chris mentioned that his workdays get mixed up with long work hours to follow as household chores were done during working hours and work was conducted after clocking out. He said that he enjoys his job and, therefore, it has not become a problem, yet. Carl has urged his team members to bear work-life balance in mind. Since the leaders cannot observe how employees are doing or handling their workloads in the same way as they can when working co-located, due to the nature of virtual work modes as stated by Malhotra et al. (2007), is it of utmost importance that leaders address this matter. As seen in the statement of Alice, putting on a smile and hide feelings is more likely to occur in a virtual setting, which might result in a decrease in well-being among team members. Additionally, data suggests that the borderlines regarding work-life balance get indistinct when previously co-located teams go online. This indicates that policies have to be developed for being able to handle similar situations in the future as well as possible, also for maintaining work relations since it is not unlikely that they might suffer in the long run if the matter is not addressed.

Working environment

The second challenge identified concerns the working environment in previously co-located teams becoming VTs in times of crisis. In Case A, Anna mentioned that she now cannot control it which made her wonder how team members were doing. Members of Alpha Team agreed with the importance of the working environment and that it was severely affected by starting to work from home. Alex and Allan stated that after establishing a home office, the quality of the work environment improved heavily. In Case C, Carl explained that the responsibility for the employees' work environment does not change when they start working from home, but

controlling it is, however, problematic. According to Carina, leaders must address this issue in order to keep efficiency high. Across the cases, team members were allowed to collect screens and chairs which improved their conditions when working from home. These statements indicate that the working environment is likely to decrease when stop working at the office, which might impact the well-being and performance among employees. Therefore, this issue must be addressed and prepared for in order to prevent negative effects if additional crises arise, forcing teams to abandon their offices, or if considering engaging in virtual work modes generally, but then it is likely that teams have more time available to follow a linear development than during a crisis.

Increased technological competencies

However, there were also opportunities identified. Participants experienced an increase in technological competence as a consequence of moving online as team members were forced to learn how to handle the systems used. Several of them stated that such an increase in technological competencies was to increase efficiency. Chris claimed that it was good for the future whereas Billy and Carina experienced a decrease in efficiency since they encountered technical problems. When being thrown into a virtual environment, one must be able to adapt in order to succeed as explained by Duarte and Snyder (2006). This can result in several benefits such as increased efficiency and a stable foundation for the future. Additionally, it could be an argument for slower and more bureaucratic organizations speeding up, for instance, digitalization. However, team members must be provided with satisfactory conditions in order to prevent frustration to grow as tasks take longer to complete.

Changed work modes in the future

As previously co-located teams start to engage in virtual work modes, advantages were identified that according to data can have implications for future work arrangements. For instance, Bella, Carl, and Chris experienced that the decreased number of meetings had positive effects on efficiency and were only held when needed. Besides being fewer of them, the virtual meetings also started and ended on time. The same participants mentioned that the advantages identified from virtual meetings might result in an increased use of them in the future, which then would save both efficiency and the environment. However, the social aspect cannot be disregarded as data suggests and discussed above. At times, engaging in virtual meetings seems to increase efficiency, but the loss of social inputs from these meetings will probably outweigh its advantages in the long run, if solely relying on them. It could be suitable for some meetings

to be replaced by meetings in a virtual environment as data displays that it is functioning well, Carl, for instance, mentioned that for management team meetings, many have to travel far. This kind of meeting is an example of which ones could be reduced.

Surprisingly, the lack of physical proximity can also possibly enable leaders and followers to deepen their relationship. This could be seen in the statement of Bianca who expressed that she gets to know the team members better after starting to engage in virtual work modes. Carl stated that communication became more frequent and social when being part of a VT. Such statements were, however, not identified among subordinates.

5.5 Answering the research questions

The thematic analysis assisted us in identifying how work relations between leaders and followers changed when previously co-located teams become VTs in times of crisis. Below we answer our research questions.

- *How and why do leader and follower work relations change when previously co-located teams become virtual teams in times of crisis?*

The transition into a virtual setting entails a change in means of communication that decreases the number of spontaneous social interactions, which made the work arrangements less relational in Case A and B. The work became more task-orientated and communication was double-checked. Additionally, addressing sensitive matters was perceived as inappropriate through virtual tools. Consequently, followers became less inclined reaching out to their leader regarding matters of a sensitive kind as well as minor issues. However, some saw it as an opportunity for less independent team members to develop and learn how to find answers themselves. The loss of social input that usually was received from the workplace impacted most of the followers' motivation in Case A and B. In the highly independent Case C, motivation was not gained from interactions between leader and follower but to have a sufficient amount of work tasks. However, the work relations changed in that regard that the team leader became more social when the team went online. Taken together, the transition into VTs during the pandemic of covid-19 implied an initial move from leadership towards management. However, some followers seemed to take a more proactive position than usual in efforts to impact their new reality, indicating that the co-production of leadership occurs in a virtual setting as well. The team's independence prior to becoming a VT also affects to what degree the work relations between leaders and followers are changed.

- *How are the leader and follower work relations before and after?*

Prior to becoming VTs, the work relations between leader and followers were based on more spontaneous interactions, and through these interactions, leadership was socially constructed. The relations did not include having to actively plan when to interact. When they met, they could also interact with one another differently, read body language, and pick up other nonverbal cues. Furthermore, the followers were less independent before the transition. Consequently, before moving into a virtual setting leaders and followers had a closer connection in Case A and B. However, in Case C the work relations have not changed significantly. The reason for this might be because of them being a R&D department in which people are working highly independently and where follower and leader relations are hard to define as people here often are self-motivated through their own tasks.

- *What affects the shift in work relations?*

Geographical dispersion brings a loss of social interactions when previously co-located teams become VTs in times of crisis. This affects the shifts in work relations between leaders and followers discussed above. Therefore, geographical dispersion can be argued to be the reason for the shift in work relations since it brought several consequences that impacted the work relations.

- *How does this interact with the leadership styles used?*

The changed situation of becoming a VT has brought more loneliness, uncertainty, requirements of self-discipline, and a loss of social interactions. This situation is therefore unstable for many, not only emotionally but also how to manage work under such circumstances. Leaders have at first focused upon managerial tasks and this to make everything function, which the transition into a virtual environment required. Then it became apparent that the new situation brought the use of a leadership style that leans towards the affiliative/supportive style. Here the leaders have tried to make it possible for followers to reflect upon things during meetings which they have made become more informal and not just about work, well-being comes many times from social interactions at work. Leaders have paid attention to people and this to be able to support them if needed. Thus, to make sure that people feel good has been the way leader has adapted their behavior.

6. CONCLUSION

6.1 Key findings

Previously co-located teams becoming VTs in times of crisis face changes in leader-follower work relations. The transition into a VT initially entails an increased use of management whereas leadership is put on hold until managerial practices are in place. What follows is an increased task-orientation and a loss of the benefits that spontaneous social interactions bring which affect the possibility to socially construct leadership between leader and follower. However, this for a period of time since leaders eventually are likely to adopt a more supportive behavior. This study underlines the importance of leadership as a relational process between leaders and followers, which still apply when entering a virtual setting. However, leadership activities such as inspiring and motivating become more difficult to conduct in this kind of setting and seems to be of higher importance than when working co-located to reduce the anxiety from the uncertain situation. Virtual leaders face several challenges when entering a virtual environment due to the loss of social interactions, and it is also through leader and follower interactions that they together can co-produce leadership. Virtual leaders must be highly adaptive to the situation at hand and be able to identify followers' emotions and needs through computer-mediated tools. Since leaders cannot possibly observe followers as when working in co-located work modes, the followers' role in the co-production of leadership becomes evident. Therefore, followers have to take a more proactive position and inform the leaders of what is needed for them to be able to endure and impact the changes. If not, they will be led in a manner that by leaders is estimated to be satisfactory, and this will more likely result in management than in leadership, where control and structure exceed supportive behaviors. The degree of prior team member independence determines to what extent this transition impacts followers' motivation and well-being. Less independent followers may find this difficult to deal with under these circumstances. Hence, leader and follower work relations have changed as their teams have transitioned into a virtual environment.

6.2 Theoretical implications

How leader and follower work relations change when previously co-located teams become VTs in times of crisis had not yet been addressed by previous research. However, this research provides an understanding of what to bear in mind when facing such a transition which adds to

the knowledge about the transitional process to become a VT, something that according to Gilson et al. (2015) had been ignored by research.

Maintaining relations in previously co-located teams becoming VTs is just as important as in ‘traditional’ VTs, in which team members are unknown to each other. It cannot be taken for granted that the already existing relations endure the transition without virtual leadership efforts. However, as co-produced leadership suggests, followers play an important role as leaders cannot fully appreciate what followers need without them being proactive enough and enlighten the leaders.

This study can confirm that the challenges VTs are facing presented by previous research such as communication (e.g. Dulebohn and Hoch, 2017; Munkvold and Zigurs, 2007; Saunders and Ahuja, 2006), creating and maintaining relationships (e.g. Breu and Hemingway, 2004; Pauleen and Yoong, 2001; Saunders and Ahuja, 2006), establishing trust (e.g. Brahm and Kunze, 2012; Chinowsky and Rojas, 2003); Ford et al., 2017) and the lack of social interaction among team members (e.g. Chinowsky and Rojas, 2003; Daim et al., 2012; Dulebohn and Hoch, 2017), to some extent applies to previously co-located teams becoming VTs in times of crisis as well. Creating relationships and establishing trust was, however, not addressed as the teams were already existing. Data did not suggest that it should have been addressed in this context. The challenge of swift task outcomes (e.g. Tong et al., 2013; Munkvold and Zigurs, 2007; Zigurs, 2003) is not expected by teams in the transition of becoming a VT during a crisis. However, data suggests additional challenges for virtual leaders to attend to when previously co-located teams become VTs in times of crisis, these are the challenges of maintaining work-life balance and working environment. These challenges might relate to virtual managers but must, nevertheless, also be addressed by virtual leaders.

6.3 Practical implications

As spontaneous social interactions disappear when going online, relational effects are to follow which might turn out to decrease, for instance, employee motivation and commitment. This study highlights the importance of the workplace and the relational benefits gained from there, which cannot be obtained in a virtual environment. Previously co-located teams becoming VTs might be good enough for a period of time, but not a sustainable solution in the long run. However, during crises, engaging in virtual work modes might be the difference of staying in business or not and should, therefore, be prepared for. Some issues must, nevertheless, be considered for it to function well. The indistinct borderlines of work-life balance in swiftly

emerged VTs must be addressed in order to preserve the balance. Additionally, as there are no work environment guidelines for VTs, this has to be addressed for maintaining the well-being of employees and thereby their efficiency and motivation.

Since it is impossible to tell when the covid-19 pandemic is over and the fact that additional crises can arise just as suddenly, it is essential that practices are developed to ensure that employee well-being is satisfactory. Moreover, leaders in Case B and C found it difficult to lead in a virtual environment, this can indicate that organizations should educate their leaders in virtual leadership since it might not be the last time they engage in virtual work modes.

Additionally, independence is needed since when becoming VTs, the previously co-located teams became even more independent. Therefore, it is likely to be suitable for teams possessing a moderate to high degree of prior independence.

There is a need for leadership in previously co-located teams becoming VTs due to a crisis as leadership can provide team members with a reduced level of anxiety, increased motivation, and bring a sense of belonging. Therefore, leadership must be considered throughout the transition.

6.4 Limitations and suggestions for future research

This study was conducted during the covid-19 pandemic with teams finding themselves in the early stages of a hasty transition into a virtual setting. Therefore, it would be interesting for future research to explore how attitudes towards engaging in virtual work modes are changing over time, in teams that normally employ co-located work modes.

Only Alpha Team was a VT on a daily basis. Bravo and Charlie Team had various forms of rotations. However, the days not spent at the office, they were VTs. This might have affected their perceptions of engaging in virtual work modes.

This study needs to be replicated in other contexts with other team characteristics, for instance, with less independent teams. Furthermore, future research could explore how Zigurs' (2003) dimensions of cultural and organizational dispersion are affected by a transition into a virtual setting during a crisis.

As our findings suggested, efficiency was at times increasing when the studied teams worked as VTs. Hence, when the crisis is over, and teams can return to business as usual, it would be

interesting to explore if work practices remain similar or if advantages were identified that changes these, such as the benefits from the reduced number of meetings.

6.5 Work process and authors' contributions

The process of writing this thesis has been challenging with ups and downs and at times stressful, but it has also been very rewarding as we have learned a lot during these months. This thesis is the result of our combined efforts. We have both been involved with and discussed all its parts. Even if we have written separate sections within the thesis, we cannot disconnect our efforts from the whole. We both believe that the workload has been distributed equally.

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APPENDICES

APPENDIX A. INTERVIEW GUIDE SUPERIOR

Initial questions:

- Are you ok with that the interview is being recorded?
- Number of years at the company and in the team?
- What is your position and main work tasks?
- Do you have any previous experience with virtual teams?

Main questions:

- What is leadership for you?
- How has you and your team been affected by the current covid-19 outbreak?
- How are you practicing leadership under these circumstances?
- How is the uncertainty handled?
- What types of challenges have you come across and which do you foresee?
- What preparations made you able to handle the situation the way you did?

APPENDIX B. INTERVIEW GUIDE SUBORDINATE

Initial questions:

- Are you ok with that the interview is being recorded?
- Number of years at the company and in the team?
- What is your position and main work tasks?
- Do you have any previous experience with virtual teams?

Main questions:

- What is leadership for you?
- How has you and your team been affected by the current covid-19 outbreak?
- How are leadership practiced under these circumstances?
- How is the uncertainty handled?
- What types of challenges have you come across and which do you foresee?
- What preparations made you able to handle the situation the way you did?