



UNIVERSITY OF  
GOTHENBURG

# INVOLUNTARY E-COLLABORATION AS EXPERIENCED BY TEAM MEMBERS

- A qualitative study of white-collar dispersed teams during the crisis of COVID-19

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Examiner: Monica Andersson Bäck

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## Abstract

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**Purpose:** The purpose of this thesis is to explore how team members have experienced their collaboration regarding the shift from the previously-known-as-normal office-conducted work, to the COVID-19-induced remote work.

**Theory:** This study is mainly based upon Relational Coordination Theory, since it provides a good foundation for understanding coordinating mechanisms in team collaboration. Additionally, the Integrative Model of Group Development is applied as a complement in order to give an understanding of the different group phases the teams in this study operate within.

**Method:** This study was conducted with qualitative research methodology, using empirical data from semi-structured interviews with eleven informants from a case company.

**Results:** The study concluded that chat and email have become the substitute for previous face-to-face communication, replacing the valuable tool of ‘cross-talk’ and face-to-face discussions on-site. The increase of meetings since the shift to remote work has led to decreased possibility to reach other team members, and thereby caused some stress among employees. The factor of creating strong internal relations within teams in order to achieve joint goals, trust and mutual respect was confirmed important for remote collaboration. To create and maintain social relationships proved somewhat difficult for new members, communicating using only information communication technologies (ICTs) with their new team. There were few conflicts within the interviewed teams, partly due to them having established strong internal relations when co-located. Coordination issues instead stemmed from difficulties in the non-existent ‘cross-talk’ and other face-to-face communication, during e-collaboration. Lastly, some form of future hybrid model for remote- and co-located work is desired by the informants post-pandemic, proving that remote work has been experienced as both favorable and unfavorable.

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# 1. INTRODUCTION

## 1.1. Background

The current 21st century has already been referred to as ‘The Information Age’ (Rogers, Castree & Kitchin, 2013), a ‘Knowledge Economy’ (Holland, 2015) and ‘The Fourth Industrial Revolution’ (Liao, Rocha Loures, Deschamps, Brezinski & Venâncio, 2018). Indeed, the development for several decades has been characterized by an improving digitalization of society and work life (e.g., Kauffmann & Carmi, 2017). The world we live in is undeniably globalized and consequently, everyday life means smaller distances for connecting with other parts of the world regarding i.e., communication and innovation, travels, job opportunities and availability of products (Collins, 2015). Although globalization has resulted in several benefits for people, businesses and even countries, the connected world was also one of the triggers for the COVID-19 virus developing into a pandemic and world-wide crisis in 2020 (Vellingiri et al., 2020).

Starting in the last month of 2019, the first case of what would later be termed a pandemic broke out in the city of Wuhan, China (Yawson, 2020). As it would later be called, in popular speech, COVID-19 resulted in governments all over the world taking preventative measures to avoid further spread of the infection in the population. The Swedish Government closely collaborated with The Public Health Authority (Folkhälsomyndigheten) during the crisis and introduced different general guidelines and restrictions for several institutions in society (Folkhälsomyndigheten.se, 2021). One of the instructions with considerable implications for both organisations and individuals is to conduct professional work from home, or working remotely, to the greatest extent possible.

During the pandemic, around 32% of the Swedish population are working remotely compared to the 2% who did so before the pandemic (Regeringsuppdrag I2020/01584/D). However, working from home was far from a new apparatus even pre-pandemic, but had rather been an increasing trend in modern work life several years before (Kraut, Fussell, Brennan & Siegel, 2002) and companies have for a long time adopted the concept of dispersed teams (Assudani, 2005). Today, many employees show interest in continuing working from home to some extent even after the Government’s guidelines change and the pandemic is a less pressing issue; making the remote work trend, and therefore dispersed teams, accelerate to become even

stronger (Hickman & Robison, 2020). Hence, it is a pressing issue for organisations to establish and continue to develop tools, routines and processes for successful remote work and collaboration, also in the future work life. Specifically, collaboration and coordination in work teams have changed significantly since team members have relocated to working from home (DeFilippis, Impink, Singell, Polzer & Sadun, 2020). The patterns and strategies of communication with colleagues during the crisis's remote work are created from complete scratch in several cases, since many workplaces shifted to remote work almost over-night (Floris, 2020).

Lately, there has been a high incidence of naming post-pandemic time as the 'next normal' (Yawson, 2020) or 'new normal' (Regeringsuppdrag I2020/01584/D), although nobody can claim to predict what it will look like. Indeed, there seems to be benefits linked to permitting employees to conduct work from home; they become more satisfied, enthusiastic and engaged in their jobs and towards the organisation (Stone, Horan & Flaxman, 2018). A good work life balance is increasingly considered important for employees and working from home is an appreciated benefit that employers can offer (Hickman & Robison, 2020). However, e-collaboration is not necessarily always beneficial. For example, Perry, Rubino & Hunter (2018) affirm that some employees experience high levels of stress when working remotely. Although, several advantages advocate for the trend of increased remote working forthwith, but perhaps not on the same scale as during the pandemic. The business world has also realized that collaboration between employees is an important factor for growth, both before (Delaryd, 2019) and after the pandemic (Industritorget, 2020). Thus, with individual benefits for employees to work from home occasionally, together with a business world that is increasingly dependent on collaboration, organisations will need to find a solution for team members effectively coordinating their work.

## **1.2. Problem statement**

The uncertain world we live in - in which a pandemic can strike and surprise most parts of the world - is not a new phenomenon in neither the business world nor the academic field (Bennett & Lemoine, 2014). The acronym of VUCA (volatile, uncertain, complex, ambiguous) suitably describes the situation of the current pandemic and is now more relevant than ever; what will our society at large, the labour market, businesses and individuals' futures look like? How wide-spread continuous remote work will be in the future on a societal level is yet unknown

but is an issue that organisations soon will have to make decisions about, regarding their own employees.

Runsten (2011) acknowledges that there is a need for further research on real teams in organisations that conduct their everyday work, rather than the predominant set-up for research when observing groups, namely, to choose certain environments such as the military, schools, educational and therapeutic environments or even laboratories with groups constructed for the occasion. We will, with our thesis, respond to this request for studies about authentic teams that collaborate continuously in order to perform their work in a for-profit organisation. Further, research from the perspective of employees, rather than the most often applied management view, has been requested (Runsten, 2011).

Although there is research about co-located and virtual teams respectively, there is a very limited selection of studies about the *same teams* experiencing *both* situations. Conducting work remotely has induced challenges and new experiences, both for organisations and employees. We therefore hope to contribute with more knowledge of how the ‘next’ or ‘new normal’ could most beneficially be organized regarding team collaboration, when remote work is wished for but not necessary. Our study will hopefully contribute with insight of how organisations can shape their strategy on the subject of team collaboration in a highly digitalized and globalized world and in what is termed as the ‘new normal’ business world.

### **1.3. Research purpose and questions**

Our purpose for the thesis is to explore how the shift from office-conducted work, to working remote has changed the experience of collaboration between team members, from their point of view.

- What experiences do team members have of their internal collaboration, regarding the shift from on-site to e-collaboration?
- Which changes in work practices have been experienced as unfavorable in terms of supporting collaboration?
- Which changes in work practices have been experienced as favorable in terms of supporting collaboration?

## 2. LITERATURE REVIEW

Our case company's teams are at present working for a business that rapidly implemented remote work for previously co-located employees, all in line with the Swedish government's guidelines due to the COVID-19 pandemic. We will therefore review the research of so-called 'co-located teams', which our informants could be classified as before the pandemic, to find eventual similarities or guidelines for what has been discovered in previous research as beneficial respectively unfavorable for team collaboration. To broaden our perspective, we will analyze studies about remote work from both pre-pandemic times as well as newer research about team collaboration, gathered during the pandemic. However, DeFilippis et al. (2020) address that some caution should be practiced when generalizing insights from research about remote work prior to the pandemic, since it was then conducted during less volatile times and in most cases voluntary.

### **2.1. Team and group dynamics**

Cohen & Bailey (1997) acknowledge that the term 'teams' and 'groups' can be used interchangeably, which we will do specifically in this section. An explanation of the different terms applied to the same phenomenon, is that they adhere from two different fields of research; the management literature more often adopts the 'team' concept, while the academic literature has tended towards using groups. Through the paper, however, the term 'team' will be most frequently used.

Researchers have produced a considerable number of studies regarding teams in organisations, in several fields of research. We have selectively chosen research themes that we will review below, relevant to our thesis.

#### **2.1.1. Crisis management**

One example of research about teams in the workplace, relevant to our study since the pandemic of COVID-19 has affected organisations greatly, is crisis management in teams. Espinosa, Nan & Carmel (2015) conducted a literature review on research about teams' crisis management. Their analysis showed that the cause of the crises affecting the teams were most often due to external factors and only 10 % caused by internal turmoil. Another result of their

study showed that time constraints and other obstacles to daily operations are the largest source for complications regarding teams' ability to manage crises.

### **2.1.2. Team success**

Cohen & Bailey (1997) found that one of the most impactful factors when reviewing team success, was from which perspective the assessment was made; team members themselves rated their performance as higher if they experienced healthy internal processes, such as effective conflict management and good collaboration. However, the authors found that managers, with less insight into the teams' group dynamics, rather rated the teams' success depending on external factors, e.g., the frequency of stakeholder contact. For a more comprehensive view of team success, we will use three perspectives on team effectiveness in our literature review and analysis of data.

According to Runsten (2011), the extensive existing research regarding what makes teams successful, when effectiveness is the point of analysis, can be categorized into three segments: the resource and management branch, the relational branch and the collective unit branch. These will be presented below, followed by a section of challenges raised by the three branches that could be associated with the teams of our case study.

#### 2.1.2.1. The resource and management branch

The largest academic foundation within the three segments exists within this field of research, which includes studies and theories of which the teams' resources and external prerequisites are, and hence, how these conditions influence the team's result (Runsten, 2011).

Some factors that, according to this perspective, bring about success for teams are pertinent leadership that provides coaching to team members when needed, tasks that indeed are suitable for teamwork, clear objectives and directions, the necessary resources to conduct the work and an organisational environment that supports the team (Hackman, 1987). Another additional factor for team success, occurring in later work by the same author, is whether the group is a real team, i.e., if it has a somewhat stability of membership, if the members need to collaborate and if there are distinct boundaries between the group and the rest of the organisation (Hackman, 2002).

In conclusion, according to the resource and management perspective, these above-mentioned conditions would, when fulfilled, increase the possibility of a more effective team performance. However, this perspective implicitly suggests that every team with the same conditions would get the same output, thereby disregarding the prevailing internal processes, which does not give us insight of how team members themselves could behave and interact to increase - or decrease - the group's success (Runsten, 2011).

#### 2.1.2.2. The relational branch

Within the relational branch of research about team effectiveness are theories that focus on team members' interaction and the groups' development and growth (Runsten, 2011). The factor of social relationships between team members is thereby considered a crucial aspect for team success. During the development groups go through, there is room for improvements in the relationships and increased knowledge between team members, and therefore a possibility to improve the team's performance over time. However, longer time as a group is not a guarantee for improvements in effectiveness, since development through the phases can stagnate or retrogress. The Integrative Model of Group Development by Susan Wheelan, which will be described in a later chapter, is an example of this perspective.

#### 2.1.2.3. The collective unit branch

The third section of research about team effectiveness is, according to Runsten (2011), a category that could be described as teams as a collective unit. However, this is a theme that does not yet have a foundation of equally extensive research, compared to the aforementioned branches (Svedberg, 2016). Runsten (2011) characterizes this segment of research as focusing on team members' experiences of themselves as a group and their collective behavioral pattern. Factors that affect team effectiveness are mutual understanding of tasks and other prerequisites of the group. Hence, it is the mutual understanding, or a shared mental model (Mohammed & Dumville, 2001), that is important.

As a consequence, what resources and management the team has, as is focused upon in the first-mentioned branch, is therefore deemed less important for successful team productivity, according to this field of research (Runsten, 2011). Therefore, the collective unit perspective contributes with an explanation of why teams with the same external conditions can perform differently, since internal phenomena matter more. These circumstances, such as shared

perceptions between team members, are contributing to more effective teams, rather than the quality of personal relationships between members. The presence of good interpersonal relationships does not necessarily mean that knowledge sharing between individuals improves, which Runsten (2011) exemplifies with the phenomenon of groupthink (Janis, 1982). Groupthink is developed in groups with strong relationships between members but leads to bad decisions due to censorship of information in group discussions since there is a wish to maintain peace and avoid disputes. Therefore, groupthink is inhibitory of knowledge sharing that otherwise could result in better outcomes. Nevertheless, this means that neither the second field of research - the relational branch - is interesting as an explanation for successful groups, according to the collective unit branch. Thus, according to the collective unit perspective, highly developed groups exist, e.g., as described by the Wheelan model (2016), but simultaneously with poor ability to create shared understanding and knowledge. With the same reasoning, some groups are skilled at coordinating their tasks to reach mutual goals, i.e., being highly effective, but have less well cultivated interpersonal relationships between members, for instance some flight crews or patient care teams (Gittell, 2012).

#### 2.1.2.4. Potential challenges for teams in settings with high knowledge complexity

In organisational contexts characterised by high knowledge complexity, Runsten (2011) argues that there could be difficulties in building mature interpersonal relationships between team members, due to necessary volatility for task completion; the core group of individuals in knowledge-intensive contexts often have membership in other groups simultaneously. This division results in fragmented time in each group, leading to obstacles in forming deeper social relationships between the core group's members. Naturally, the context of the team matters and knowledge-intensive settings also raise challenges in coordination (Berntzen, Moe & Stray, 2019) and knowledge distribution, since ambiguous situations often emerge and the number of team members may fluctuate in order to cater to the needs of the assignment (Runsten, 2011).

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## 2.2. Collaboration

Kauffmann & Carmi (2017, p 12) define collaboration as the following:

*“In general, collaboration results from a need to solve a problem, create, or innovate. It is defined as a process in which autonomous actors interact through formal and informal negotiation.”*

Siemens, Cunningham, Duff & Warwick (2011) highlight several benefits for undertaking collaboration; hence, working in teams is an important tool for achieving more than one individual can accomplish themselves. The authors discovered that intra-team diversity of people and their set of knowledge can be a great benefit, but does simultaneously create challenges that should be addressed; e.g conflict management, shared expectations, coordination of tasks and scheduling meetings. Below, we will present some themes of research especially relevant for our thesis.

Kauffmann & Carmi (2017) illustrate that ‘ongoing teams’ perform better compared to temporary ones, in which team members don’t know each other yet, but must collaborate and execute complex work tasks in a productive manner. The researchers explain this phenomenon with how ongoing teams have already created well-functioning internal communication, a sense of deeper trust and a foundation for handling conflicts. Regarding collaboration processes of problem solving, decision making and innovation and creativity, the difference was greatest in favor for ongoing teams. The importance of social interaction when completing more complex tasks is also emphasized by the authors (ibid).

Relationships between team members have been shown in previous research to be of importance when examining their collaboration. One such example is Hansen & Løvås’s (2004) examination of which prerequisites a high-technology multinational company had for intra-firm competence transfer between subsidiaries. One of their findings showed that large spatial distances between subsidiaries could hinder teams from reaching out to the right people for help with their work; instead, employees preferred to contact people they knew, rather than someone unfamiliar with more knowledge. The authors suggest that building informal relations between subsidiaries’ employees could prevent this aversion of approaching people outside the teams’ closest network. However, maintaining informal relationships from a distance, or even building them without previous face-to-face interaction, is challenging.

Cramton (2001) augments our understanding of challenges virtual teams face regarding collaboration, by outlining the difficulties of creating behavioural norms within the group, establishing an understanding of joint goals and tasks and knowledge-sharing between members. For instance, one specific dilemma for team members in dispersed teams is how to interpret silence in communication from other individuals of the group, using solely information communication technologies (ICTs) for communication. Hence, an absent email

response could mean anything from indifference to the content, to strong disagreement or even the person having technical issues that impeded an answer back.

### **2.2.1. Communication**

Espinosa et al. (2015) underline in their summarized research about dispersed teams that teams consisting of dispersed members have several challenges regarding communication against them, compared to co-located ones; conflicts, knowledge-sharing, establishing trust and interpersonal relationships, coordinating their work in a timely manner, and lastly, using technology for communicating. However, one of their findings was that dispersed team members - although working from different time zones, i.e 'temporal distance' - succeeded in conducting their shared work faster than co-located team members were able to. However, higher speed of collaboration happened at the expense of greater coordination challenges and thereby lower quality of work. The authors recommend frequent communication between dispersed team members, as a tool to improve coordination, share knowledge and create common ground. Maznevski & Chudoba (2000) found in their research that teams collaborating digitally across the globe changed their communication patterns to match the prevailing task. Accordingly, the teams got more productive.

Assudani (2005) presents research showing that members of dispersed teams were considerably better in creating mutual knowledge if they had become acquainted with each other prior to the team work. Thus, her recommendation is that when forming a group of members that will e-collaborate, communication and activities that facilitate familiarity among the people in the team is of great importance. However, these measures could be achieved with technology. Nevertheless, communication is a tool for creating personal bonds in the initial stages of teamwork and continuously during the process, in order to share expertise and create mutual contexts.

#### **2.2.1.1 Digital tools**

Face-to-face communication does not have to be the most important tool when building trust within a virtual team, even though it is considered the most effective tool for communicating (Thomas, 2010). However, building trust is essential when striving to achieve collaborative and cohesive teams, and a culture based on knowledge sharing. Cheng (2017) establishes that individuals' attitudes to collaborating via the internet correlate to both their self-esteem and their past involvement in such practices. Hence, higher levels of self-acceptance increased the

likeliness for a positive attitude towards e-collaboration and past experience of e-collaboration predicted greater likelihood to intend to engage in it again. Additionally, Kraut et al. (2002) acknowledge the fact that team members with longer physical distance between them showed an overall less likelihood to engage in voluntary collaboration. Kiesler & Cummings (2002) explain that teams with already established close relationships between members are more successful in using ICTs for continuing to perform towards their goals and sustain their motivation over time.

Cheng (2017) addresses that tools facilitating e-collaboration can be divided into two groups; asynchronous technologies that allow collaboration at each participants' own convenience (e.g., emails, online forums and collaborative documents) and synchronous technologies that take place in real-time for the involved parties (e.g., video calls). Malhotra & Majchrzak (2014) underline that the forms of communication between dispersed team members is best chosen by matching with the task. For example, Maznevski & Chudoba (2000) discovered that asynchronous means of communication were most beneficially matched to the information gathering task, while missions of making joint decisions or solving problems were best suited with synchronous channels. So, even though email may be considered time effective, it doesn't mean it is the most fitting choice replacing face-to-face communication in all contexts (Thomas, 2010).

Increased flexibility solutions in the form of digital platforms have been implemented to make work more efficient in today's work life. For example, Gofine & Clark (2017) found that a team of researchers and research assistants could use the cloud-based communication program Slack, to improve their coordination and communication within the team. However, other research discloses ICTs as creating increased pressure on employees due to requirements of them being accessible and answering technology mediated communication at all times (Barber & Santuzzi, 2015). Hence, digital communication can be considered a resource and a way of achieving wellbeing at work, when it functions as a tool to get control over employees' work situation and creates a sense of autonomy (Bordi, Okkonen, Mäkineniemi, Heikkilä-Tammi, 2018). But contrarily, technology may cause disturbances in the workday flow if perceived as too demanding, and therefore hindering the daily work due to its effect of increasing employees' workload, resulting in higher volume of messages. Also, employees may experience several various communication channels as challenging to keep up with. Only one theme in the study by Bordi et al. (2018), namely flexibility in communication, was considered

a benefit following digital communication. Being more free in scheduling their own work hours resulted in higher employee well-being. In order to ensure coexistence of employee well-being and continued productivity, practitioners and organisations must implement boundaries regarding the use of ICTs, according to the authors.

#### 2.2.1.2. Meetings

Recent research suggests that the number of meetings employees attended in the beginning of the pandemic increased in frequency, and so did the number of emails sent (DeFilippis et al. 2020). Nevertheless, the collected length of meetings decreased which may be explained by the shortened attention span in virtual meetings, compared to the usually longer face-to-face meetings. Another assumption by the authors (ibid) is that additional challenges due to the COVID-19 pandemic, such as taking care of children temporarily not attending school, shortens the time available for the employees to stay focused during longer meetings. According to Waizenegger, McKenna, Cai & Bendz (2020), some employees experience digital meetings as too frequent and long, therefore disturbing their productivity. Overall, already conducted research relating to the pandemic indicates a trend in changed communication patterns, not the least in meeting structures, due to the increase of employees working remotely. Although digital communication and all its platforms have increased the possibility to attend meetings from different parts of the world, many participants in the study by Bordi et al. (2018) declared a preference to attending meetings face-to-face, since appreciating in-person interaction, but expressed it as being easier to conduct certain tasks individually from home.

Siemens et al. (2011) recommend that, in order to manage the challenges with communication in digital project teams, strong communication processes must be prioritised. For instance, digital or in-person meetings should be planned with the necessary frequency for the specific project, but the authors acknowledge that the purpose of these meetings is not only to make decisions or engage in information-sharing, but to strengthen the team spirit and gather around common goals.

#### **2.2.2. Conflict prevention**

Goñi, Cortázar, Alvares, Donoso, & Miranda (2020) conducted a recent study about how students adapted to collaborating digitally during the pandemic. The authors concluded that, on a team level, fewer conflicts between team members were reported by the students

themselves. However, the authors hypothesize that this phenomenon could be an effect of conflict avoidance, which was now facilitated as a tactic due to remote work. In addition, Vance, Kulturel-Konak & Konak (2015) disclose in another study, conducted before the pandemic, that students attending online education showed a preference of working alone, rather than engaging in teamwork with fellow students. Downstream, task conflicts are nevertheless important for performance in team projects over time, since avoiding them impairs the students' learning, the authors argue (Goñi et al., 2020).

Previous research indicates that the pattern of a team's conflict management would have an impact on the collected team innovation (Desivilya, Somech & Lidgoste, 2010). The teams' internal relationships are important regarding their effectiveness and innovation and team members who show interest in achieving healthy internal relationships are more likely to build a sense of trust and efficient collaboration together within the team. In order to improve a collaborative environment and thus managing internal conflicts in a team, sharing information and having mutual respect for various interests and desires is crucial. The researchers also underline the great importance of letting everyone speak their mind, striving to achieve a broad perspective by inviting every members' opinion to surface. Thus, communication patterns in a team that encourages constructive and collaborative discussions have a positive effect on team innovation (Desivilya et al, 2010).

### **2.2.3. Conflict management**

Previous research has shown a correlation between a team's shared identity and its impact on both affective and task conflicts (Mortensen & Hinds, 2001). A stronger shared team identity can decrease conflicts in work teams. Therefore, the researchers predicted they would find results pointing towards geographically dispersed teams having more issues with conflicts compared to co-located ones, which they did not. One potential explanation for this is that the increased focus on the tasks following the adaption to working apart, obstructed opportunities for conflicts to grow or even emerge (ibid).

Kraut et al. (2002) state that team members working in physical proximity have easier access to their co-workers and therefore can observe their work, quickly adjust any dissimilar work processes and accordingly comprehend where coordination difficulties occur. Hence, the authors believe that teams with dispersed members can experience struggle with coordinating their work and in consequence be more subjected to emerging conflicts (ibid). Kiesler &

Cummings (2002) declare that in order to avoid a gradually escalating conflict, informal communication between team members is of great importance when understanding each other's daily work situation.

### **2.3. Fast changing environment**

Our case company has for several years been subjected to an environment with high complexity, on a market that moves quickly. Adding to that, the COVID-19 pandemic put further significance to the concept of unawareness of what will happen in a globalized world and inherently affect whole societies and the labour market. The phenomena of a world characterized by VUCA conditions (volatile, uncertain, complex and ambiguous) is not new, but has rather been referenced since the late 1990's, when the US military coined the concept (Whiteman, 1998). Already at that time, the notion of preparing and taking strategic measures for an increasingly VUCA environment was urged. Actors operating in today's business climate still face the same challenges, in addition to the higher risks imposed on them (e.g., Van Tulder, Verbeke, & Jankowska, 2019). Detrimental for companies' survival is to challenge traditional ways of operating (Schoemaker, Heaton & Teece, 2018). However, the concept of VUCA certainly advanced in dimension when COVID-19 impromptu struck the world with a health and economic crisis combined (Caligiuri, De Cieri, Minbaeva, Verbeke & Zimmermann, 2020). Hence, with the pandemic affecting every country, business and each single individual, uncertainty is nevertheless also a part of being an employee working from home and worrying about job security (ibid).

#### **2.3.1. HRM research about COVID-19**

The HRM-field of research indubitably contains fewer studies about the effect of the COVID-19 pandemic, compared to the medical field. However, HRM research is important for investigating the consequences and outcomes of the challenges faced for organisations (Caligiuri et al., 2020). As previously explained, this thesis is an example of that, contributing to highlight what specific challenges and potential benefits that remote collaboration entails for employees. However, not only research needs to be conducted, but Caligiuri et al. (2020) state that now is the ultimate time for managers and organisations to invest in activities for strengthening the collaboration within their teams, since the members are all experiencing the same difficult period of time.

Some research has already been conducted regarding potential positive effects following the shift to working remotely. For instance, Waizenegger et al. (2020) underline how previously quite separate workers as a result of the digital collaboration now have been brought ‘socially’ closer to co-workers since the shift. The difficult feelings experienced among team members due to the pandemic and following remote work may work as a way of encouraging cohesion within the teams, a way of making them move forward as a stronger unity (Caligiuri et al, 2020). Along with this, Byrnes, Kiely & Dunne (2020) describe the COVID-19 pandemic as a traction force to really develop, invest and evolve in adapting to new modern technology and knowledge regarding modern digital communication. The authors underline that several of these creative solutions may result in continuous learning and advancement in finding new ways of communicating and collaborating in the future, in which the current pandemic plays a part in driving the evolution, eventually resulting in advantages for businesses.

## 3. THEORETICAL FRAMEWORK

### 3.1. Definition co-located teams

There exists, in research about teams, a practically unexpressed assumption that team members meet physically when collaborating, if not specifically specified as research about distributed or dispersed teams. We will use the below definition of teams, knowing that it is created for co-located ones, while later expanding the case study's teams' definition with terms as 'virtual' and 'dispersed'.

There are several definitions of teams to be found in academic research. We will loosely use one provided by Cohen & Bailey (1997):

*“A team is a collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems [...]”.*

We believe this definition of teams to be specific enough to use as a foundation for our research, while broad enough to give the possibility of incorporating the factor of remote work, which is our focal point.

### 3.2. Definition dispersed and virtual teams

Assudani (2009) describes the term 'dispersed team' as a description for members in a group that has common goals and work together across location and time, rarely meet in person but with help of technology nevertheless can collaborate. However, the author uses the term as a synonym to 'geographically dispersed', meaning that different time zones between team members is not an essential factor for using the concept. We deem that the term 'dispersed' accommodates several phenomena of teams that in some way collaborate remotely.

Occasionally the term 'distributed teams' appeared in our review of previous research. However, distributed teams is a concept that describes *several* teams working in the same project or with the same goals, but each smaller core team usually has members working more closely geographically together (Keith, 2020). However, dispersed teams - as already mentioned - have team members from the *same* team collaborating from different locations.

The changes that COVID-19 imposed on society is an example of just that, which means that the concept of dispersed teams is what this thesis focuses on.

Further, Hertel, Geister & Konradt (2005) also acknowledge that establishing a definition of ‘virtual teams’ is controversial, since different versions of them have existed for several years, accordingly with the advancement of technology that continuously allows for better collaboration between team members that are not co-located. However, the authors (ibid) address that unanimity consists in which minimal factors that construct a virtual team: it (1) contains minimum two persons that, (2) need to collaborate in order to meet common goals, while (3) at least one member is dispersed, i.e., working geographically from different locations or in distinct time-zones, resulting in that (4) collaboration needs to be conducted with help of ICTs and media (chat, email, phone, video calls etc.)

Previous research has also recognised the distinction between ‘ongoing virtual teams’ and ‘temporary virtual teams’ (see e.g., Kauffmann & Carmi, 2017). Nevertheless, the lifespan of a team is often decided before its forming; will the team disband after performing a specific task, i.e., being temporary, or is the team characterized by a more permanent membership amongst the parts of the group, i.e., being an ongoing virtual team? We humbly suggest that our study will contribute to the research and filling a gap with an investigation about ongoing co-located teams that - involuntarily due to the pandemic - became a temporary virtual team. Thus, the future will tell which description our case study teams will correspond with post-pandemic.

To conclude, Kauffmann & Carmi (2017) simplifies the notion by using the following definition of virtual teams, which we believe facilitates the understanding of the phenomenon, and therefore can be applied to our study:

*"Distributed work teams whose members are geographically dispersed and coordinate their work predominantly with electronic information and communication technologies"*  
(p. 11).

### **3.3. Definition conflicts**

To define conflict, Jordan (2019, p. 5) describes it as:

*“When one or more parties have desires they are not willing to give up, and feel that someone else is blocking them from fulfilling these desires. When significant unfulfilled desires persist, frustration arises, which compels at least one of the parties to act in some way in relation to the other party.”*

According to Jordan’s (2019) perspective, the frustrated party feels urged to do something to stop the other party from blocking their desire, which often causes frustration. As long as frustration persists, this party will feel an urge to get rid of that feeling. However, the alternative of giving up strong desires is not always an option; nevertheless, the person decides to hinder the other party from keeping them from their desire, and thus continuing the notion of escalating the situation into a conflict.

### **3.4. Relational Coordination Theory**

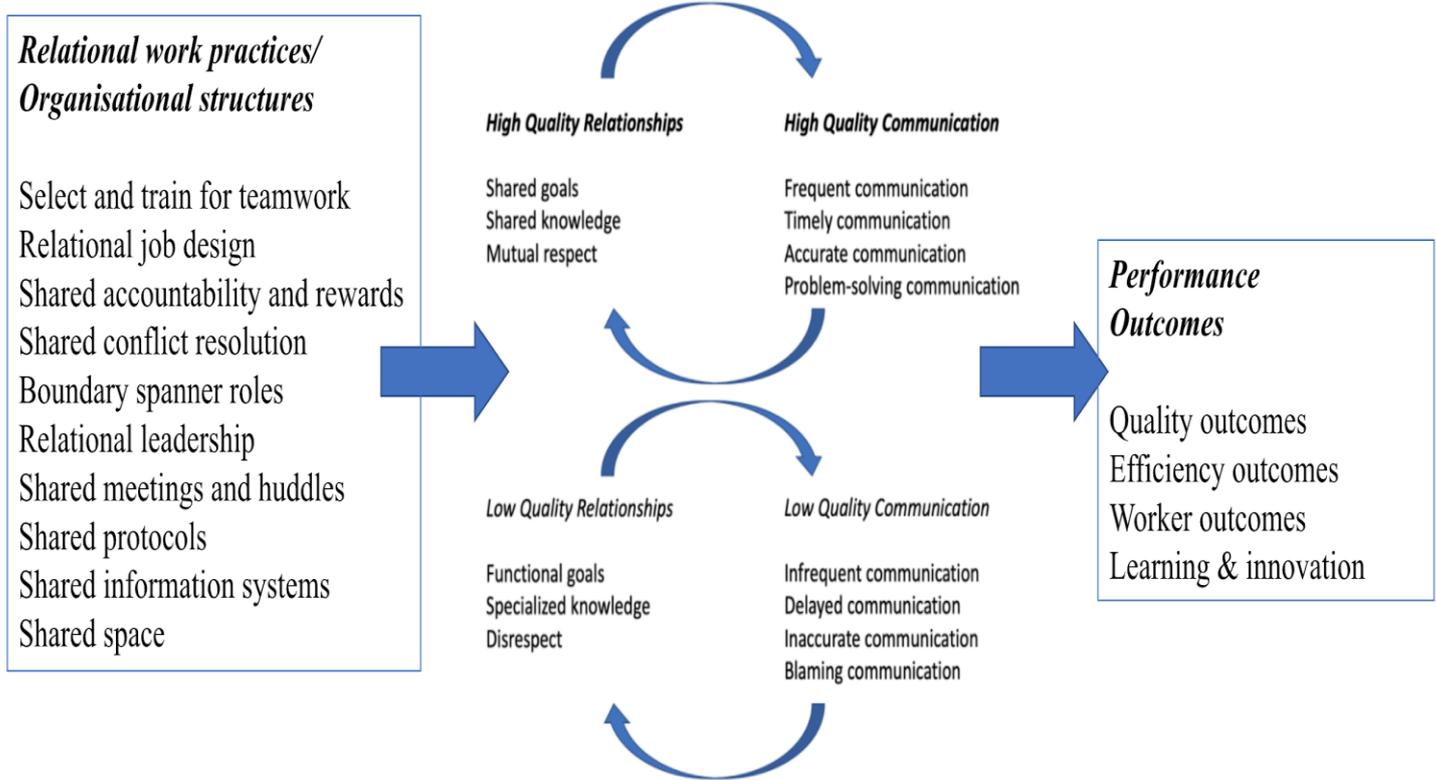
Relational Coordination Theory (RCT) was originally coined by Thompson (1967) and later developed by other researchers. Thompson (1967) declared that, in teamwork where members are highly interdependent with their tasks, there is a need for adjusting to each other since everyone’s work has an effect on their team members’ work. However, he believed that the cost for mutual adjustment would put a restraint on organisations to apply it in a high extent. Instead, he argued that other coordination mechanisms with less team member interaction could replace the high-cost alternatives, e.g., implementing standardisation of processes, detailed planning, supervision, scheduling and other routines (Kogut & Zanders, 1996). However, later researchers have disputed these measures of coordination mechanisms - which would reduce team member contact - and argued that these would only be effective in climates with low uncertainty and low interdependence of tasks among participants (see e.g., Galbraith, 1972). We have already established that the business climate of today is characterised with VUCA conditions, namely high uncertainty among other things, and we will therefore look further into RTC’s developed form that has taken shape in more present times, hence towards the more *relational* aspects.

Gittell (2012) presents an overview of the theory with a literature review of previous studies using the theoretical framework of RCT, and guidelines for how to conduct research to further develop it. Today’s RCT specifically focuses on the social processes between team members that conduct complex work (Gittell, 2012). Indeed, not only mechanisms for task interdependence are important, but also between the humans that carry out the work. However, the author (Gittell, 2013) clarifies that the relationships the theory refers to are professional ties

between *roles*, rather than colleagues liking each other on a personal level. For instance, it should not make a large impact if a new colleague enters the team of functional roles, since it is not personal relationships that establish beneficial coordination prerequisites, according to the theory. Gittell & Suchman (2013:1) describe the assumption of the coordination concept within RCT as; “[...] *taking place through a network of relationships among participants in a work process*”.

According to the theory, three characteristics in relationships between team members are most important for supporting efficient coordination, and thereby high performance: shared goals, shared knowledge and mutual respect. Further, these three phenomena are reinforced by - and conjointly reinforce - specific dimensions of communication: frequent, timely, accurate and problem-solving. However, lower quality of communication and relationships between team members will also have a mutually reinforcing effect (Gittell, 2012).

In newer research, Bolton, Logan & Gittell (2021) present a systematic review of studies that apply RCT. Their findings include confirmation of the notion that strong relationships between roles in the same work group bring higher performance outcomes. Also, stronger ties between team members increase psychological safety within the group (Carmeli & Gittell, 2009). However, Bolton et al. (2021) also warn about the reinforcing effect of lower quality relationships, arguing that such can have a harmful effect on communication and thereby reducing the group’s collaboration capacity and coordination efforts. The dimensions of relational coordination, its conditions theorized to strengthen it and its outcomes, is shown in Figure 1.



**Figure 1.** The dimensions of RCT and mutually reinforcing aspects of communication in a Structure → process → outcomes model. Adapted from Gittell (2011:Fig. 30.2) and merged with Bolton, Logan & Gittell (2021:Fig. 1).

Nevertheless, being a model of importance for developing the theory, the contemporary and further developed version of RCT considers the process of well-functioning coordination and its dimensions as *not linear*. The model presents the linear view of the theory, i.e., (1) organizational prerequisites that strengthen the (2) mutually reinforcing dimensions of coordination and that, (3) in turn result in certain outcomes. The newer version of RCT is instead a dynamic theory and, nevertheless, Bolton et al. (2021) propose an updated model to describe relational coordination and its factors, as shown in Figure 2.

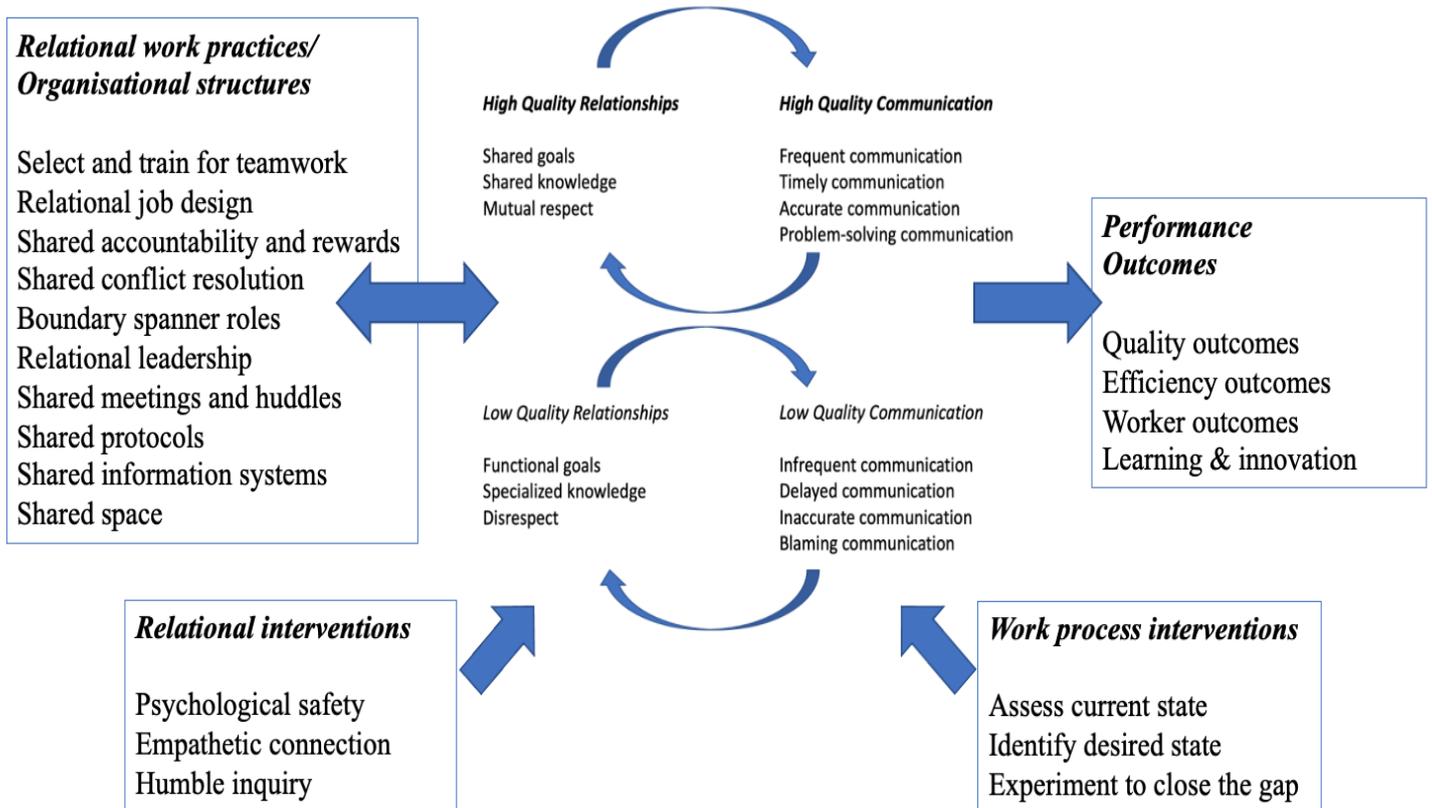


Figure 2. Relational coordination as a dynamic theory. Adapted from Bolton, Logan & Gittell (2021: Fig. 1).

In their literature review of in total 233 studies applying RTC, the authors present findings that support a model in which the steps are overturned and merged (ibid). Organisational structures can affect functional roles' relationships and communication, but also vice versa. As an example, Gittell (2016) found that low quality relationships decreased the willingness for introducing relational work practices, suggesting that relational coordination must improve so that implementation of organizational structures across functions would be more welcomed.

### 3.4.1. Shared goals

Shared goals between roles that are engaged in the same work processes are, according RCT, crucial for effective coordination (Gittell, 2012). Shared team goals, rather than functional ones, serve as a linkage between team members, making them more efficient when deciding how to react when new information surfaces in their work. Bolton et al. (2021) further explain that shared goals between parties have the effect of unifying them and improve their willingness to work towards the greater of the whole. Nevertheless, Gittell (2012) states that shared goals between employees in different functions are uncommon in organisations.

### **3.4.2. Shared knowledge**

Shared knowledge refers to knowing what tasks other participants carry out, and therefore contributes to team members' ability to see how their own work is connected to the work process in its entirety (Gittell, 2012). This dimension is likewise often inadequate in firms, according to the author. Dougherty (1992) discovered in research about large firms, that employees in different functions likely possess disparate backgrounds of training, skills and social environments, resulting in them thinking differently from each other. Thus, these types of dissimilar thinking could generate less effective coordination since cross-functional communication proved more demanding.

### **3.4.3. Mutual respect**

Gittell (2013) explains that the factor of mutual respect for each other's' competences facilitates for team members to disregard any power and status barriers between them, and instead lets them take responsibility for the whole. Mutual respect counteracts team members to potentially refer to hierarchy and the inherent responsibilities in certain roles. This dimension additionally ensures that unnecessary division between participants in a collaborative process is prevented, even though certain occupations traditionally are considered having higher status (Gittell, 2012). Lastly, mutual respect entails team members to recognize the good work of others, as simultaneously bringing more awareness to how their behavior impacts other team members.

### **3.4.4. Communication dimensions**

The theory of relational coordination deems that certain aspects of communication between team members are beneficial to coordination, namely being frequent, timely, accurate and problem-solving. The already mentioned dimensions of relationships are reinforcing, as well as being reinforced, by these communication factors. For instance, Gittell (2013) states that shared goals contribute as a motivational factor for team members to engage in communication that is characterized with high quality and problem-solving attributes, rather than expressing accusations of whose fault an eventual wrong doing is. Further, timely communication between functions is a possibility due to team members' knowledge of each other's work and its prerequisites. The shared knowledge contains insights about which role needs to know what in which time. The same awareness of different responsibilities and tasks contribute to accurate communication, since the knowledge includes how a participant's own tasks interrelate with

other functions. Lastly, Gittell (2013) acknowledges that mutual respect in a group leads to effective communication between them, regardless of status hierarchies, which in turn increases the likelihood of them engaging in problem-solving conversations and further developing their shared knowledge.

### **3.4.5. Organizational structures**

Gittell (2011) mentions that another condition for effective coordination, according to RCT, is organisational structures, or relational work practices, that support it. Although individual actors independently can build healthy relationships between functions, the prerequisites of management will contribute to them emerging, or even shape disadvantageous ones instead. For example, organizations that deliberately build cross-functional teams could expect to gain more cohesive teams with members having closer relationships and communication. These structures can be intentionally designed, for instance by HR in the organisation (Bolton et al., 2021). Examples of strategic work processes that can improve relational coordination in organisations are e.g., shared accountability and rewards programs, shared spaces, relational leadership and shared meetings.

### **3.4.6. Method for researching RCT**

Traditionally, RCT has been applied in work groups that regularly conduct coordinated work between functions - e.g., in patient care and flight crews - by letting participants answer a standardized survey with questions about their relationships and communication with other roles they collaborate with (Gittell, 2012). However, newer reviews of the theory acknowledge that research can be conducted with adaptations of this survey; both qualitative and quantitative versions (Bolton et al., 2021). For instance, Berntzen et al. (2019) conducted a study in which RCT was applied, examining how product owners both within and across their teams coordinated knowledge. This research was conducted using both observations and interviews, with the assertion of therefore accessing the participants' own understanding of events. We aim for similar data, namely our team members' own experiences, and thus believe that the theory is applicable with a qualitative approach. This will be expanded upon in the methodology chapter.

### **3.4.7. Selection of theory**

Our choice of theory developed through an extensive literature review and initial familiarization with the situation our case study teams were situated in, which was explained during a pilot interview with an HR professional from our case company. Huang (2010) states that ongoing teams - which our informants are part of - are suited for tasks and projects that evolve over time, thus being in need of coordination between members. Additionally, Kauffmann & Carmi (2017) distinguish another linkage between our theory and case study, namely that relationships are often created when necessary, communication and interplay between team members unfold in the collaboration process.

Gittell (2013) summarizes the dimensions of RCT as mutual reinforcement between relationships and communication that lay the foundation for coordinated collaboration. These are aspects that we were convinced we would manage to collect data on, likewise being of interest for theory development and contributing with rewarding results for our case company teams. There has been encouragement from researchers to further develop the theory in different directions, e.g., Gittell (2011) requests studies in which the employees' benefits or disadvantages are examined, when their employers intend to apply collaboration between functions. Hence, we seek to analyse team members' experiences in this study. Further, Gittell (2011) calls for research that analyse organisational change in relation to RCT. Although, not as apparent as the aforementioned inquiry, we believe that we partially fulfill this request, since the current pandemic has brought large, imposed changes for organisations - our case company included - and will continue to do so in its aftermath.

### **3.5. The Integrative Model of Group Development**

Team development and team implementation is far from a new phenomenon in academic research and as a complement to RCT, we will look into another theoretical framework; the well-known psychology professor Susan Wheelan's model of Integrative Model of Group Development (IMGD) - developed from extensive observations of groups and by compiling previous theories about them. The model contains five distinguishable phases that teams go through, beginning when members become a group, through the development of getting acquainted with each other by creating norms and behaviors, hopefully performing towards mutual goals, all the way into the end of collaboration as a team (Wheelan, 2016).

The phases in the IMGD model are more specifically called (1) Dependency & Inclusion, (2) Counterdependency & Fight, (3) Trust & Structure, (4) Work & Productivity, and sometimes, (5) Termination (Wheelan, 2016). In the first stage, group members are highly dependent on their leader and strongly concerned with feeling included. As a consequence, little focus is devoted to the actual tasks. Communication between members is polite with no room for disagreements since there is a need for feeling safe. However, the model's second stage is characterized by inevitable conflicts, since members fight about goals, processes and values when they need to establish common grounds. Wheelan (2016) claims that these disagreements are necessary in order to create a climate of trust and openness to expressing differing opinions between team members. Nevertheless, groups that have reached the third stage have managed to build a willingness towards collaboration and engage in communication that is more focused on the prevalent tasks. Members still expect conflicts to arise but tolerate these and are able to manage them more effectively. Further, Wheelan (2016) declares that stage four groups are fairly uncommon and being a member in one is a fantastic experience. These teams are highly productive and efficient in delivering towards their goals, which is dependent on close collaboration which has emerged by going through the previous stages. Lastly, the fifth stage of dissolving the group is sometimes, but not always, reached.

Most studies and produced models are developed by studying co-located teams and the dynamics between team members, which the IMGD model is an example of. Wheelan (2016) includes a chapter in the book describing virtual team communication, but does not, however, nuance her model or problematise around the issue of challenges that virtual teams might face in the development stages, that co-located teams may not. Although, Hertel et al. (2005) assert that virtual teams, no different than co-located ones, are affected by dynamics in different phases, in the development towards becoming more mature. For this reason, we will partially use the IMGD-model originally created by Susan Wheelan as a tool for analysing our case study results, reviewing how team members classify their own group. We will, however, take into consideration that our informants are members in on-going teams - previously co-located, but now temporarily virtual.

## 4. RESEARCH METHODOLOGY

### 4.1. Choice of method

With the aspiration to examine team members' own experiences, we conducted qualitative semi-structured interviews, both in order to go in-depth with the subject, while also having a structured guide to rely on (Bryman, 2011). The semi-structured interview guide (see Appendix 1) was based on previous research and discussion, while also allowing both us and the informant to be flexible during the interview (Flick, 2013; Bryman, 2011).

### 4.2. Selection of participants

Our informants belong to three different teams from the case company. We will refer to these as Team 1, Team 2 and Team 3. Altogether, 11 informants participated in the study, including all five members of Team 1 and three members from each of Team 2 and Team 3. Some of the teams participating in this study have a different structure of roles compared to other teams, which is a fact to keep in mind when taking part of this material and study overall. The teams have remained almost intact since pre-pandemic times, meaning that the team members worked together as co-located, before adjusting to remote work. The selection of such teams was a conscious choice to increase the likelihood that our results would answer to our research purpose of capturing the experience of collaboration when shifting work location and steering towards a digital work environment, rather than the experience of introducing new team members in a digital work environment.

In addition to interviewing 11 informants, one initial pilot interview was conducted with the purpose of both of us informing our case company about the aim of the study, as well as receiving further background information about their organizational structure and the teams whose members we had not yet interviewed. For this pilot interview, an initial interview guide was designed, containing a majority of questions addressed solely for that purpose, since the aim was to get a broader understanding of the business and organizational context in which we were about to conduct the study. However, the pilot interview is not included in the presentation of the results of the study but was transcribed and taken into account when formulating the interview guide that we used on the informants subsequently.

### **4.3. Data collection**

The data was collected by conducting 11 semi-structured interviews with team members from 3 teams. The interviews with our main informants lasted between 55-70 minutes.

The interview guide was created through discussions between us and our supervisor as well as insights from reviews of previous research and theory. In summary, the interview guide contained the themes of; collaboration (pre-pandemic and during), cooperation difficulties, conflict management and future aspirations for collaboration (please view Appendix 1 for the full guide). The guide allowed for further reasonings, within the themes of questions, when the informant wanted to add something or got into deeper explanations in particular parts of the interview.

Interviews may have a pitfall in accommodating for leading questions, if the researcher is not aware of that problem, and this is an issue we attempted to avoid to the greatest extent possible by formulating open-ended questions without including mis-leading formulations (Jørgensen & Phillips, 2002). Fortunately, all informants agreed to being recorded, which also allowed us to focus entirely on managing the conversation, instead of having to take notes. With the help of recordings, we could also minimize the risk of answers being distorted or misinterpreted when subsequently analyzing the material.

### **4.4. Data analysis**

The chosen method for analyzing our data is thematic analysis, which is described as one of the most fundamental and important methods for qualitative research (Braun & Clarke, 2006). The method consists of depicting recurrent patterns - i.e., themes - from a set of collected data.

The analysis process starts already when transcribing the material (Bryman, 2011). The semi-structured interviews in this study were transcribed as soon as possible after they had been conducted, in order to have the interview fresh in mind. They were transcribed verbatim, including marking the long pauses or when the informant took some time to re-think his or her answers, which according to Braun & Clarke (2006), makes the data set richer and provides more details to analyse. However, some paragraphs were not coded since they included personal information which should not be mentioned in the report, but nevertheless were important to ask about to give us an understanding of the informants' bigger context (such as

e.g., years of employment). The interviews were divided equally between us, resulting in each transcribing 5,5 conversations each.

Apart from initially transcribing the material, the first step in a thematic analysis is, according to Braun & Clarke (2006), to start searching for patterns and repetitive mentions in the data. The authors state the importance of familiarizing oneself with the data, which is why transcriptions are a helpful tool when performing thematic analysis. The researcher should read through the transcripts in this initial phase, to produce ideas and locate patterns and themes early in the process. So, we individually read through all the transcripts in order to gain a broader initial perspective and depict our first data patterns.

The second step in thematic analysis, according to Braun & Clarke (2006), is to create initial codes for the data. After listing some initial thoughts of interesting subjects in the first step, now is the time to create actual codes. This phase is about categorizing the data into meaningful groups of codes, based on the patterns of the material. The initial codes created differ from the themes created later on, since the codes are more specific and themes often broader and more general (ibid). Braun & Clarke (2006) state that the researcher has a choice in using either data driven themes - which in this case is the chosen method - rather than on a theoretical framework. Thus, the codes were selected from interview data. However, we are aware that our previously conducted review of literature and theories could have had an impact on the coding of data (Bryman, 2011). In this case, we chose 33 initial codes, which we color-coded and systematically coded each transcript with (see example below). In order to get an overview of the codes, we chose to collect all of the color-sorted codes in a document, which we later used for creating themes.

### Initial code example

Code name: Chat/email creates good communication opportunities within the team during remote work (Purple)	Transcript segment: “Well, chat is... If we speak between meetings and such, quick questions perhaps, chat has replaced those physical interactions to some extent”
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The third step in the data analysis process involves creating broader themes out of the initial codes (Braun & Clarke, 2006). The authors emphasize that this selection is a completely conscious choice of the researcher, rather than a question of ‘discovering’ themes. Some initial

codes may be considered suitable to become themes, while the rest will be categorized and summarized into new ones. Some codes may not fit anywhere at this point, nevertheless the authors (ibid) underline the importance of not yet excluding any codes, as their relevance might show themselves later in the process. The authors also suggest making a mind map or other visual forms of categorizations at this point, in order to get an overview of all the codes successively being categorized or becoming broader themes. Therefore, we categorized the initial codes into our first, broader themes in a chart, from which we were able to create more specific themes, creating an additional chart. The initial codes were thereby categorized step-by-step within new, more compact themes.

The fourth step of thematic analysis revolves around investigating the validity of the initial coding and the broader themes (Braun & Clarke, 2006). The researcher must investigate whether the initial codes fit within the theme they have been categorized, and if not, the mis-fitted codes must either be placed within a different theme, or altogether create a new one that more appropriately describes those codes. We discovered that several of the initial codes could risk overlapping and being too similar, which is why we chose to place each similar code into one common category.

The fifth step focuses on sharpening the themes into getting more definite (Braun & Clarke, 2006). The authors suggest testing to explain each theme with a few sentences in order for the themes not to get too diverse or sprawling. Each theme should have an essence and sub-themes could be created with the aim of organizing each group of initial codes even more precisely. It is also during this step in the thematic analysis the researcher should ensure that no themes overlap one another or are too similar in character. Although the themes may have been given preliminary titles, now is also the time to name the themes with concise and focused names. We created the final themes within which the codes were placed, and these became the structure for the result in the report. The codes were placed under the best-fitted themes and to achieve high validity, we tried describing each theme in one or two sentences, as recommended by Braun & Clarke (2006).

#### **4.5. Reliability and validity**

Reliability can be described from different perspectives. In short, it entails if a study can be considered reliable, by e.g., being able to replicate it or generalize to a broader context than the

one being researched at the moment (Bryman, 2011). In order to achieve high reliability on this study we aimed to conduct a number of interviews that would ensure us data saturation within the framework of our research questions (Bryman, 2011; Flick, 2013). However, the extensive work that entails from transcribing and analyzing the material made us set a limit when taking into account the time given for a master thesis project. The conducted interviews were held during, on average, an hour per informant which made it possible to go in-depth into our questions and reasonings from the informants. This contributed to detailed descriptions of their experiences and opinions, adding valuable contributions to this study. An additional measure in order to increase the reliability of the study was to conduct the already mentioned pilot interview with an HR professional within the case company. This provided us with background information regarding the teams, the organizational structure and the re-organization recently implemented.

Validity means that a study measures what it claims to do (Bryman, 2011). With the aim of increasing the validity, we put great effort into creating the interview guide, through extensive discussions and reviewing previous research. The purpose of the study was continually returned to, in order to make sure the questions increased the validity and put the research in the decided direction. The approach of semi-structured interviews made it possible for us to add questions during the interviews in some cases when needed, which may be considered a way of increasing the validity instead of the informants starting to discuss insignificant details without our guidance. A further thing to take into account is whether the informants felt safe opening up and being honest during the interviews, and in addition whether they can be considered giving us a honest portrait of their own experiences. We experienced high willingness to open up, since several informants shared personal experiences freely during the interviews.

#### **4.6. Ethical considerations**

The informants participating in this study have been informed of how their participation will be anonymized in the final thesis, according to the ethical principles described by Bryman (2011) and Flick (2013). Also, the informants were asked for consent to record the sound of their interview, for later analysis. Additionally, the purpose of the study was described and an explanation of why we asked for their participation was presented both in the interview situation as well as in the electronic invitation, in order to make sure that they felt comfortable sharing their opinions with us. We also informed the participants that their team members,

including team leader, and our contact person from the company were all aware of their participation, although no names would be mentioned in written text, neither citations or particular information that easily could be traceable to one informant. Both in the initial phase and continually through the thesis process, we discussed the necessary ethical considerations with our contact person from the organization and agreed on several decisions regarding the anonymity of the organization as well as the informants.

#### **4.7. Limitations of method**

For future research within the category of remote team collaboration, it may be relevant to collect an even greater extent of data in order to further increase the reliability, even though this study included a reasonable amount of data with regard to the frames for a master thesis project. Also, when collaborating with an organization, the researcher is to some extent dependent on other people's schedule and the case company's possibility to involve and engage informants. Nevertheless, it turned out to be a successful outcome that the majority of the asked team members wanted to participate and found our study interesting to take part in.

The interviews were only conducted with employees, not managers, which potentially would have provided an interesting and broader perspective to the study and even increased the reliability. However, when taking the purpose of the study into consideration, the study was consciously limited to only include employees from the teams since the managerial perspective has been researched in several of the previous studies done within this field, which is why the employee perspective brings new insights to this area of research within HRM.

Lastly, since the interviews were conducted via digital video meetings - due to COVID-19 restrictions - it is possible that some body language and other implicit signals were lost due to the fact that we were not able to meet the informants face-to-face. However, all informants except two of them, agreed to have their camera on during the conversation, which resulted in us being able to at least apprehend their facial expressions; contributing by adding some implicit signals for us to read combined with answers to our questions.

#### **4.8. Case company description**

Our case company is a larger organisation within manufacturing, based in Sweden. They operate as part of a group which together provides business-to-business sales of both services

and products. As every company - since the pandemic brought consequences to the business world - the organisation experienced turbulent times but did its best to manage. Operating in an industry that, according to spokespersons within the company, even before the pandemic had been characterized by VUCA conditions, they had some experience of managing uncertainty. During the initial time of the pandemic crisis, along with support packages from the Swedish Government, the company decided to furlough a majority of their employees and requested that all work possible should be conducted remotely.

In addition to the furloughs in the beginning of the pandemic, it should be noted that the organisation had shortly before the pandemic also implemented a re-organisation that affected the composition of several teams. The majority of our informants had almost exclusively worked together in an intact team, before and through the particularly turbulent times, but since most teams lost or received additional members, we eventually interviewed such team members and understood that their special circumstances for teamwork and collaboration needed to be taken into consideration. In general, the three teams all described having a formal team leader, partly working operatively in the team to various extent. Common objectives and visions are partly shared; overall company-wide goals exist and to various extent common goals are approached within each team.

Our case company is, in addition to smaller teams (which we conducted interviews with), also organised in cross-functional teams throughout their departments, in order to handle the organisation's knowledge-complex and high-intensive surroundings. Thus, some informants have more independent work tasks from their fellow team members and work to a larger extent in a cross-functional way. It has become increasingly important for organisations to be able to make use of individuals' competences in an assembled manner, also called collective intelligence or knowledge integration (Runsten, 2011). Especially organisations with complex products or offers - which is a characteristic for our case company - are highly dependent on succeeding in integrating employees' knowledge into the organisation and likewise coordinate employees' different expertise to deliver on targets and goals. Therefore, the case company is well-matched with our aim to investigate the theme of collaboration.

## 5. FINDINGS

We will present our findings by introducing the themes and sub-themes that we chose through thematic analysis. The themes, in turn, have been selected since we deem them to best answer our research questions (see Figure 3). As a reminder, our purpose for this study is to explore how the shift from office-conducted work, to working remote has changed the experience of collaboration between team members, from their point of view. We have two sections in this chapter, where each will present answers to one research question. The descriptive quotes that some themes are exemplified with have been translated by us into English, since the interviews were conducted in Swedish.

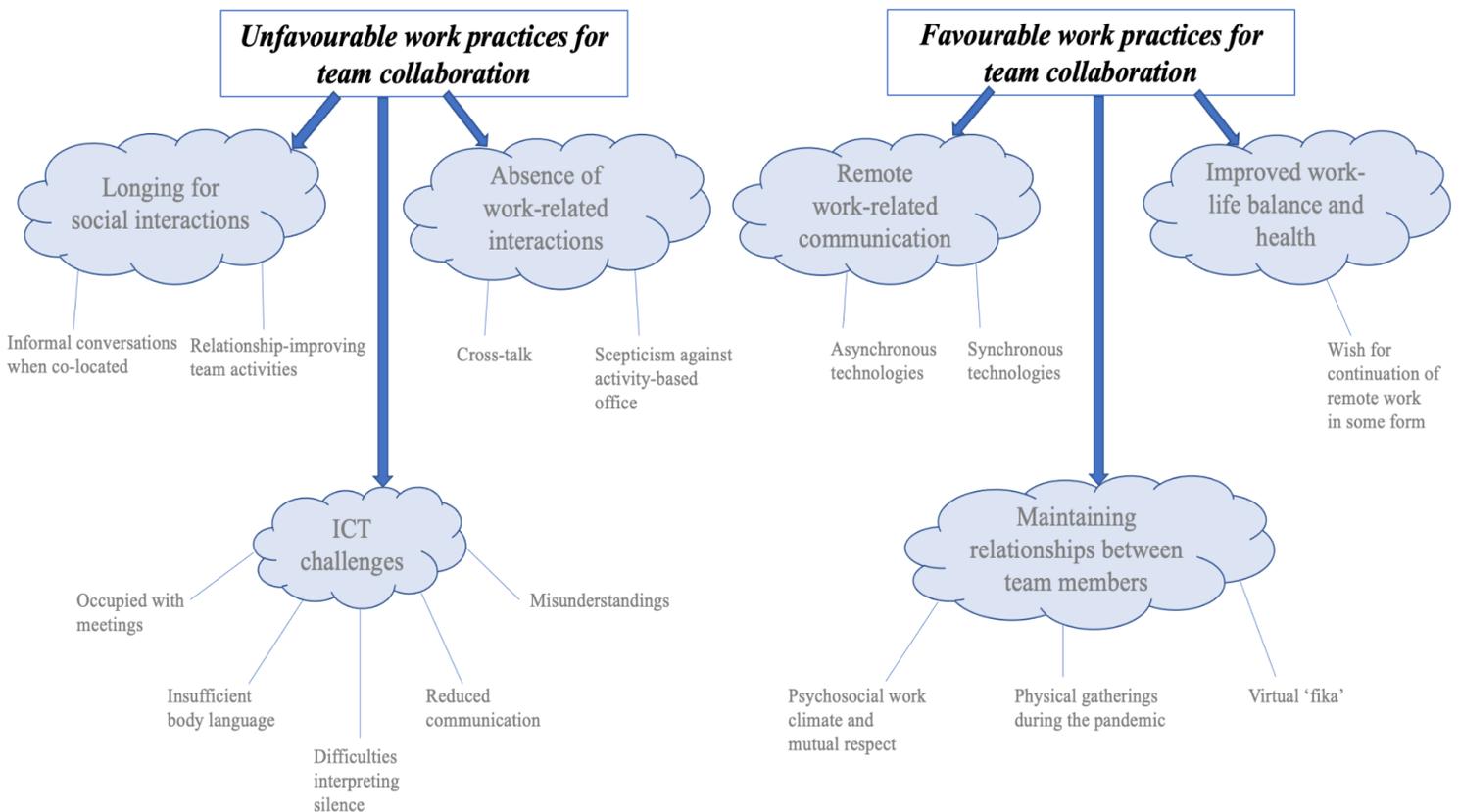


Figure 3. Overview of this study's themes and sub-themes, created by us, using thematic analysis.

### 5.1. Unfavorable work practices for team collaboration

Our first research question is: Which changes in work practices have been experienced as *unfavorable* in terms of supporting collaboration, regarding the shift from on-site to e-collaboration?

*Regarding this aspect, our informants have pinpointed several aspects of their team collaboration that have suffered or been experienced as challenging during the pandemic, and thereby presented as themes; Longing for social interactions, ICT challenges and Absence of work-related interactions. Each theme has appurtenant sub-themes.*

### **5.1.1. Longing for social interactions**

#### 5.1.1.1. Informal conversations when co-located

Informants representing all the three teams underlined the lack of social conversations during e-collaboration and that they miss informal communication taking place at the office, such as spontaneously starting a conversation across the desk or at the coffee machine. Members from one of the teams especially expressed that they often laughed together, when co-located. Laughter still occurs during video meetings, but not to the same extent. The climate in the teams was generally described as being open and talkative, which in one of the teams was expressed as a contributing factor to them having such fun together.

Some informants described how informal topics came up naturally in conversation, when co-located, which is something that has almost vanished when working remotely. Some informants even mentioned difficulties of noticing if a colleague is not feeling psychologically well, during this time of working remotely, when not able to have informal conversations to the same extent as before. A few interviewees did, in fact, acknowledge that they did not feel very well in the initial stages of working from home, partly due to missing the social aspects of being co-located.

Almost all informants, represented in all of the three teams, spoke about wanting to return to a co-located setting when possible, partly due to the fact of missing informal conversations as a social factor.

#### 5.1.1.2. Relationship-improving team activities

Several informants describe how they miss the informal, daily activities when co-located with team members. Daily interactions such as eating their lunches together, taking coffee breaks or short walks, but also occasionally traveling off-site to unite their team, are now performed in virtual versions or are non-existent. Specifically, the easy access to colleagues and the personal

atmosphere that activities face-to-face signifies are important factors to why several informants from each team are longing to get back to the office.

Some interviewees express a gratitude to their co-located time and its effect on team building; the fact that they had time to build and foster team relationships through joint activities with their team members, meeting in person. Due to the reorganization just preceding the pandemic and thereafter furloughs within the company, some teams received new members that they did not get a chance to meet before the collaboration relocated to virtual forms. Two informants that in fact themselves are members in new teams after the reorganization, and therefore have not been co-located with their colleagues yet, say that it has been somewhat difficult to get a grasp of their common mission, even though they have been warmly welcomed. Informant X in an intact team explains how established relationships with team members due to activities face-to-face has helped with their e-collaboration:

*“Everything is about keeping it on the back burner for now. And, well, we have a lot for free, since we have done this for some years now. Even though there has been several reorganizations here at [case company name], we have been fairly intact. This means that even though we don’t see each other, we don’t have to start at zero. Ehm, there is a completely different situation at [a department], in which half are new members. It is almost impossible to build something new via Teams. The damage is too big. But yeah, I think we have succeeded in... keeping what we had before alive.”*

### **5.1.2. ICT challenges**

Information communication technologies have made the relatively smooth shift to e-collaboration possible. Software programs such as i.e., Microsoft Teams, Skype and Outlook have connected international team members even before the pandemic, and now, formerly co-located ones in the same way. Notwithstanding, there are many positive features, but our informants have encountered several challenges regarding their collaboration related to such digital forums. This theme specifies such instances.

#### **5.1.2.1. Occupied with meetings**

A few informants mention that e-collaboration requires even more meetings than previously. Representatives from each team express the need for regular check-ins with team members, regarding their collaboration in common projects. Regular check-ins between team members have mostly been conducted via digital meetings during the remote work. As a consequence of the prevailing so-called ‘meetings culture’ in the case company, existing even before the

pandemic - as expressed by several informants -, employees usually attend meetings for several hours each day. Thus, the meeting structure in the company is almost the same as before, only now in a digital version.

Additionally, during this time when team members are not co-located, a calendar filled with meetings results in difficulties to find time for both regular and spontaneous check-ins, that now need to fit into the schedule for each involved team member. If an employee needs to work in a focused way during the workday, informants disclose that they have to 'block' their own calendar so that they cannot be invited to a meeting during this time. Informant Y accurately summarizes this sub-theme and challenge of being occupied with meetings, not being able to regularly check-in with team members during remote collaboration:

*“Like... the only problem could be with availability. That, ehm, we are always busy in meetings. Of course... This varies, a lot from day to day and in certain periods. But still... even though you always had a lot of meetings [informant refers to when being co-located, author's note], you still had those minutes in between meetings, when you could..., it was easier to 'catch each other'.”*

#### 5.1.2.2. Insufficient body language

Naturally, when not meeting in person, body language is either non-existent (e.g., when emailing or speaking on the phone) or heavily reduced during video meetings, especially since some informants have expressed that they are not comfortable with having their camera on. To some degree, all informants mention this aspect of working remotely as unfavorable to team collaboration. Some informants even heavily emphasized this disadvantage. For instance, the disservice of reduced opportunity to interpret body language was mentioned by informant Z, in the context of presenting in a meeting:

*“[...] difficult to interpret signals, maybe to check if they are all with you. It's just... if you chair a meeting, there can sometimes be a lot of silence. Hard to know if people are even listening or scrolling through news or playing games on their phones \*laughs\*. They... you don't know if they are following along.”*

Further, when chairing meetings, another informant adds that absent body language results in hesitation about distributing time to talk. It has become more difficult to notice if someone wants to share their opinion; something that can be shown in subtle body signals, only depicted when being in the same physical room together.

### 5.1.2.3. Difficulties interpreting silence

In some of the interviews, so-called ‘silence’ has been a matter of discussion. When not co-located, it has been described as difficult to know what team members work with during the days or even the next hour. Sometimes, this is not a problem, as we will see in later presented themes; enough meetings with the purpose of coordinating team collaboration still exist. However, if there is a need to quickly get a response to a question, informants expressed that remote work and the physical absence can constitute a barrier to reaching out; something they had not hesitated to do if co-located. Informant Q exemplifies:

*“If you need to ask something, sure you can write and ask. But still, you don’t see the person and there is a ‘do not disturb’ and such things. [...] Like, when a person is offline all the time, then you cannot disturb. And, like, you can sense the situation if you are live. You understand if you can ask something... It’s about availability. Ehm, if my manager has earplugs in a meeting, I can just look at him and determine if it is an important meeting or if I can cut in with a quick question \*laughs\*”.*

Another way that the described ‘silence’ disturbs collaboration is by delaying necessary conversations. Some informants disclose that they, when co-located, easily could notice if a team member seemed stressed about work related tasks and projects, thereby offering their support. Thus, working remotely can also be a barrier for noticing when to help team members.

### 5.1.2.4. Reduced communication

Closely related to interpreting silence, reduced communication with some team members has been a factor for several informants during the pandemic. Previously co-located team members could have daily conversations even though not collaborating in a project at that time. Now, as an effect of working remotely, such spontaneous interactions are simply not happening anymore. Some informants explain that they try to maintain interactions using ICTs, but some team members are less available online and therefore not as accessible to quick check-ins with. Thus, some team members do not see each other if not attending the same meetings.

Even in meetings, reduced communication is sometimes exemplified by a less open communication climate, in contrast to before the pandemic. One informant explained that video meetings feel less dynamic and people as a consequence might hesitate to express their opinions, since small delays in the audio streaming causes disturbances. If disagreement arises, another informant expresses that this before would have been handled in another conversation in the corridor after the meeting. This way of handling conflicts is now unavailable. To handle

conflicts when e-collaborating, there needs to be *another* meeting scheduled for that purpose, meaning that working remotely demands higher effort to manage disagreements.

#### 5.1.2.5. Misunderstandings

The informants overall express great satisfaction with their teams and workplace, regarding respect and understanding for each other's' work-related opinions and communication styles. There are generally no severe conflicts within the smaller teams, even though frustration between functions is more common. However, differing opinions on the team level are treated with open communication until solved into consensus or compromise, and differing opinions are even considered as beneficial for team results. Working remotely has however impinged somewhat on this way of managing conflicts or disagreements; several informants disclose that communication through digital forums involves higher risk of misunderstandings - as a consequence of absent body language and the previously described 'silence'.

In contrast, a few informants reflected about conflicts as having reduced in intensity and volume during remote work, since face-to-face communication between differing parties has a tendency to escalate more easily than when using ICTs. Some interviewees pinpointed that digital forums implicate less chance to even notice if there are disagreements that need to be disentangled. For better or worse, any frustration between team members can more easily be ignored or go unnoticed when not co-located. The actual number of disagreements or misunderstandings during e-collaboration - either increased or decreased - are thereby difficult to detect.

### **5.1.3. Absence of work-related interactions**

Thus, informal conversations are missed for social purposes. However, this lack has also been unfavorable for performing work tasks, since work-related interactions face-to-face contributes to easier collaboration within some of the teams. Informant T expresses the clear advantageous opinion of meeting face-to-face and exchanging creative ideas:

*"As a development company, you will slowly die if employees cannot meet."*

Thus, there is an overall penchant towards some aspects of collaboration to be co-located. This theme specifies important work-related interactions that only take place in a shared physical space with team members, according to many informants.

#### 5.1.3.1. Cross-talk

Cross-talk refers to the phenomenon of hearing two or more colleagues talking about a work-related subject, and the party not directly involved in the conversation can realise that they, in fact, have something to contribute and thereby get involved themselves. According to many informants, cross-talk used to spark natural problem-solving and creativity as well as improved the collaboration by raising otherwise easily forgotten details or problems, or helping each other when needed in sudden and challenging work situations. A few informants also underline the concept of cross-talk as a way of making coordination more efficient.

Nowadays, the complete absence of cross-talk when working remotely was brought up during several interviews, especially in two of the teams. Having to schedule meetings removes the spontaneous factor altogether, which makes being a dispersed team less efficient.

#### 5.1.3.2. Skepticism against activity-based office space

Although not a part of the interview guide, the subject of a future, potentially established activity-based office space in the case company when co-located again, was independently expressed by several informants. Several members from one of the teams brought up their concern for a potential future activity-based office, emphasizing their resistance towards it. Their reason for this was a fear of losing stability and continuity in their daily work, as well as losing touch with their fellow team members, if not sharing an office together. They stated the importance of sitting next to each other to ease and improve their daily collaboration.

The same concern was also mentioned in another team, but not to the same extent or with the same amount of worry. Nevertheless, it was pointed out that an activity-based workspace might remove the purpose of going to the office at all, since the benefits of being physically at the workplace has a lot to do with meeting and socializing with team members, according to the informants.

## **5.2. Favorable work practices for team collaboration**

*Our second research question is: Which changes in work practices have been experienced as **favorable** in terms of supporting collaboration, regarding the shift from on-site to e-collaboration?*

*In order to answer this research question, our data revealed insights about team members' experiences of positive aspects of working remotely, which accordingly have been depicted and summarized in the following themes: Remote work-related communication, Maintaining relationships between team members and Improved work-life balance. Each theme has at least one sub-theme that further specifies its content.*

### **5.2.1. Remote work-related communication**

All of the informants have, overall, expressed that e-collaboration has operated sufficiently; some tasks can be performed as satisfactory as when co-located, although not better. Only some aspects of collaboration have suffered since working remotely, as described in the previous section of the result. However, ICT's have proven not only to disturb collaboration, but also helped streamline the processes for coordination and other aspects of working together as a dispersed team. This theme describes the informants' positive experiences of both asynchronous and synchronous technologies.

#### 5.2.1.1. Asynchronous technologies (emails, chat)

The case company employees have since long used emails as a way of daily communicating with colleagues all around the world as well as with co-located team members. Our informants mention that this forum is sufficient, still, and used for the purpose of formal communication and sending large volumes of information, such as attached files. However, the informants explain that the volume of emails has decreased somewhat since chat forums compensate for the need for quicker and more informal exchange. Some teams use chat groups to a larger extent than others, both for work-related and social subjects.

Both emails and chats are described as helpful in several ways, not least because they give the opportunity to send and receive information and questions that can be answered when there is time for it. Essentially, although not as efficient, chat has replaced the interactions in-between meetings or across the desk that took place when co-located, with its convenience of asking questions to team members.

#### 5.2.1.2. Synchronous technologies (video meetings, phone calls)

Since being an international company, the concept of synchronous technologies for work communication is not new to our informants, as mentioned by informant R:

*“We are used to this. It’s not like we have started to work from home, or on distance, just like that. Since we are a global company, you work with people from several different countries. So, video meetings, it’s nothing strange about it.”*

The informants have a somewhat unified opinion of video meetings being tolerable as a way of communicating within the smaller team and cross-functionally. It was also mentioned that they have, during the pandemic, learned to use the technology even better than before, e.g., introduced the norm of using the camera when meeting digitally and sharing screens to present subjects. However, informants express that the forum is best suited for active conversations if the number of participants is low.

Two of the teams had regular and scheduled team meetings once a week when co-located, which have now been satisfactorily relocated to video meetings. Coordination emerges when they inform team members of the following week’s most important goals, and in that way sharing what they will be doing during workdays. Informants from the third team, without such booked status meetings, disclose that their meetings are ad-hoc and result in them, nevertheless, being well coordinated with each other through video meetings. One informant also expressed that the check-ins with their manager have increased since the remote work, now speaking to each other almost every day on the phone, while when co-located they could walk past each other when attending different meetings several days in a row.

## **5.2.2. Maintaining relationships between team members**

### **5.2.2.1. Psychosocial work climate and mutual respect**

Mutual respect was highlighted as a success factor in all the teams when asked what they experienced as the key to maintaining good collaboration, being underlined as very important. All informants describe a well-functioning and honest work climate, in which everyone can speak their mind, share opinions and ask for assistance from other team members. Also, informants expressed the significance of respecting each other’s differences and to adapt accordingly when collaborating and discussing. In one of the teams in particular, the work climate was described as being prestige less. As long as the end result is rewarding, who made which point is not important.

However, the necessity of discussions when experiencing disagreements was emphasized in all of the three teams. The already established acceptance and respect was expressed as helpful

when having differing opinions, leading to understanding other persons' perspectives and hopefully coming to a compromise. Informant Z expresses:

*“So it is a good thing that there is some frustration and a little friction in the room sometimes... in order to, to find out what people really think.”*

Generally, the team members in the three teams did not experience a great number of conflicts within their current teams. The occurrence of misunderstandings and smaller disagreements was, however, mentioned by the informants. Nevertheless, these were described as necessary and healthy, since forcing opinions to be spoken out loud and dealt with. These eventual disagreements are often handled in a professional manner within the teams, which also characterizes their e-collaboration approach.

#### 5.2.2.2. Physical gatherings during the pandemic

The three teams have to various degrees formed a culture of attending various activities together outside of work. During the pandemic and working remotely, especially one of the teams have tried maintaining some kind of physical gatherings (outdoors, due to contagion protection), such as meeting up for walks, having lunch together or physical exercise. This team's members expressed a longing for social interaction with their team members since they had created good personal relations before working remote. Every other week, they are scheduled to meet outdoors for different activities. Informant P describes their emotions regarding the get-togethers:

*“Eh.... and then we have the possibility to meet each other live. Because we really want to meet. We miss the social aspect of what we do, so when we meet, we experience, or I experience, that I get energy when meeting the others.”*

All of the three teams underlined the importance of having regular meetings to talk and support each other or keep in touch on a personal level during the pandemic. Although only one team has managed to schedule activities outdoors.

#### 5.2.2.3. 'Virtual fika'

All of the teams have implemented a so-called “virtual fika” where they in various forms schedule a video meeting in order to keep in touch on a personal level. A lot of the informants underlined that they like having their camera on in order to improve their interaction with one another, being able to see the others' facial expressions and sharing their home office set-up. These virtual fika moments have taken various forms in the different teams but fills the need

to have someone to talk to when feeling lonely, as well as making sure that everyone is doing fine, in terms of not feeling depressed or stressed. Some teams preferred having scheduled a weekly meeting with the purpose of catching up and talking about personal matters, while others fulfilled the same purpose with small talk in the beginning of their ordinary scheduled meetings.

### **5.2.3. Improved work-life balance and health**

Several informants express the increased level of focus achieved when working from home compared to when being co-located. However, in contrast, a few informants reported to have somewhat worse conditions when working from home due to disturbances such as small children. Nevertheless, the majority of the informants felt that they got more productive at home, but also reported taking less breaks during the day. This, on the other hand, caused increased fatigue and a few of the interviewees described how they felt more exhausted after a workday at home nowadays, than they have felt when working on-site before the pandemic. Overall, though, the work-life balance has seemingly increased since they express now having the time to work out and spend time with family, instead of spending those hours on commuting back and forth to work.

With the purpose of improving employees' physical health during remote work, members in the teams participate in a company-wide competition where they individually must perform as much physical training as possible and thus collect points in an app. The competition is cross-functional against several other teams within the company and functions as a motivational tool to perform daily exercise, in whatever form it may be. This has improved several informants' physical health during the times of remote work.

#### **5.2.3.1. Wish for continuation of remote work in some form**

A large share of the informants from all three teams expressed how they would like to make use of the advantages following the remote work for the past year, but however partly returning back to the office when possible. Almost all of the informants would like to have scheduled days within each team where everyone is at the office; discussing, collaborating and meeting colleagues to catch up and have those long-wanted informal talks at the coffee machine or by their desks. The most wished for concept was to work co-located one or two days per week, and about three days remotely from home in order to be more productive when not disturbed. The days spent co-located could thereby make up for potential misunderstandings or

difficulties in interpreting body language when only communicating and collaborating remotely.

When asked about potential deteriorations of the work results due to working remotely, the informants do not seem to have noticed any as yet, which is also a contributing factor to many of them drawing the conclusion that much work can be executed remotely post-pandemic as well.

## 6. ANALYSIS AND DISCUSSION

*In a joint section, present an analysis of the findings - by identifying their similarities and differences with previous research and chosen theoretical framework - accompanied with a discussion, including reflections more freely expressed by the authors.*

### **6.1. Video meetings and digital forums**

The time of crisis has put a spotlight on ICT usage and collaboration in digital forms. Byrnes et al. (2020) remind us about the pandemic's effect on organisations' willingness to try new digital technology for communicating. These advancements give businesses new and improved ways of collaborating during remote work, which our informants are an example of. DeFilippis et al. (2020) discovered that in the beginning of the pandemic, the volumes of email and number of digital meetings increased significantly, but meetings were shorter in time than previously. Accordingly, our study confirmed that digital meetings have replaced several, previously co-located interactions between team members; conflict management, cross-talk, social conversations and coordination activities. Our informants specifically witness their teams' beneficial way of implementing a chat forum for posing quick questions to colleagues, and even have certain chats specifically for preserving close social relationships. Similar to this experience, Gofine & Clarke (2017) found that the message application Slack could improve coordination between colleagues and accordingly team efficiency. Higher frequency of check-ins has to some extent been achieved by using chat messages within the teams, following insights gained from previous research about matching communication style to the prevailing task (Malhotra & Majchrzak, 2014; Maznevski & Chudoba, 2000). Another example is email usage for gathering information, while synchronous channels are better for problem-solving and taking decisions (Maznevski & Chudoba, 2000). However, the team members also disclose negative effects from depending solely on ICT's during remote work. Namely, a great issue that interferes with the individual's autonomy, that digital tools can contribute with in the best of circumstances (Bordi et al., 2018), is the so-called 'meeting culture' that exists in the case company. As mentioned, the many meetings during the day for several employees prevailed even before remote work but has now become more challenging when only using digital forums for meetings; more administration is required to schedule meetings with the right people, there are difficulties with concentration during them, and afterwards finding time for a break between the next one. Meetings should only be booked with the necessary frequency (Siemens et al.,

2011). Similarly, Bordi et al. (2018) disclose that the workday flow is disturbed if digital communication is perceived as too demanding for employees. The reported higher concentration from home, that some informants experience as a benefit during these times, risks being overshadowed by a meeting culture in combination with ICT's as only tools for coordination within the team. This in turn may lead to higher amounts of stress and pressure, resulting in decreased employee wellbeing, less productivity and thereby less engagement in team collaboration.

Further, Espinosa et al. (2015) observed that teams with members in different time zones actually were faster in collaborating and performing their joint work tasks. Accordingly, some informants explained that their *productivity*, or work speed, had seemingly not decreased since starting remote work, but the authors (ibid) warn that collaboration in dispersed teams might suffer from lower quality since coordination requires more energy from the participants. One potential insight about this phenomenon is from Bordi et al. (2018), who discovered that ICT's, and especially forums that allow users to write in them at any time, created a self-inflicted expectation, among some employees, to be constantly available to colleagues. Several informants acknowledged that their work-life balance has increased because of the flexibility in mixing work- and private life, but that their workdays also have become longer; they did not have a finite end of the workday. One informant gives another example of increased availability, disclosing that it has become a norm to accept eating during meetings around lunch time, since meetings often were booked in a row without room for a longer lunch break. Altogether, productivity in the case company is still perceived as high, but caution to this statement should be taken by HR and management, since higher availability and energy for coordinating remote work may result in lower quality results over time.

Team members who already have strong internal relationships often find it easier to make use of ICT:s (Kiesler & Cummings, 2002). Our informants do not find it complex using ICTs as their, for now, daily tool for communicating. They describe being used to the various communication channels from previous years, thereby not viewing it as an obstacle, but rather an asset. So, the ease in using ICTs for informants in this study may not only be due to the teams' cohesiveness, but also owing to their long-lasting experience of using ICTs as a tool even before the pandemic, which might have created higher self-efficacy, resulting in future likelihood that employees will be positive to e-collaboration (Cheng, 2017). It can therefore be assumed that the way of using ICTs partly is a choice based on previous experience, in the end

resulting in greater efficiency and well-functioning knowledge-sharing within the team. Additionally, Kiesler & Cummings (2002) state that team members with already established good relations are more open to using ICTs, which is also a result of this study. Informants in most teams describe sharing respectful and transparent relationships within the team, very likely leading to them finding it uncomplicated using ICTs when collaborating remotely, and not resisting coordinating and striving towards maintained or even higher efficiency in current times.

So, the shared knowledge between members, the culture within the team and the prevailing task should decide which ICT to use in a particular context. In summary, organisations and in extension HR departments, face a big challenge in deciding about, structuring and managing today's ICT usage among employees (Bordi et al., 2018). Employees experience higher pressure when faced with too many ICT options (Barber & Santuzzi, 2015), while this is a time for organisations to experiment with new technology. This creates a delicate balancing act between possible innovation and employee well-being. Even though ICTs are somewhat efficient at this time for our informants, they long for meeting physically again, having largely to do with the social aspect of work.

## **6.2. Physical encounters**

Meeting face-to-face is today considered the most effective way of communicating (Thomas, 2010). As mentioned by Bordi et al. (2018), face-to-face interactions are highly appreciated when conducting meetings or other discussions with colleagues, which can improve internal relations within the team, and thereby ease the collaboration and thus resulting in better outcomes of work (Runsten, 2011). The creation of mutual respect can according to RCT hinder hierarchical structures from emerging within a team, hence creating a basis for equal relations (Gittell, 2012). This can, in turn, also improve the communication and further produce good work results and higher efficiency in collaboration. It may therefore be assumed that the previously established internal relations while co-located, in some of the teams prevented hierarchical barriers to emerge (ibid). This poses challenges for organisations with dispersed team members, including the case company, in their future on-boarding. Perhaps will physical encounters during the initial stages of joining a team be crucial for team success.

### 6.3. New team members

Informants explained that several teams have received new members as a result of the case company reorganization pre-pandemic. The time of remote work has imposed challenges with welcoming newcomers and ensuring that they as soon as possible become a productive member of the team. This initial period of time in a new setting, and efforts to facilitate it, is referred to as onboarding and is a process that the HR department often is partly responsible for. Although not a subject this thesis focuses upon, onboarding new team members when working remote has come up in interviews.

Building trust, psychological safety and sharing knowledge is important when striving to achieve cohesive teams, leading to increased efficiency and innovation (Kiesler & Cummings, 2002; Bolton et al., 2021). This was established when co-located for our case company teams and can partly explain their frequent and problem-solving communication during e-collaboration (Bolton et al., 2021). However, newer team members have not yet been co-located with their new team due to the pandemic, which can result in more difficulty with building mutual respect (Gittell, 2013) and behavioral norms (Wheelan, 2016), or even communicating using ICT within the team (Cheng, 2017).

Especially important to consider, when adhering to RCT, is for the team to create shared knowledge, shared goals, mutual respect and communication that supports these aspects (Gittell, 2012). However, the theory emphasizes relationships between roles and not specific people, indicating that establishing good communication guidelines is more important than social familiarisation to the team. These guidelines can therefore be a tool for standardizing the process of welcoming new members as participants to collaboration. In a similar manner, Bolton et al. (2021) bring attention to the organisational work practice of training employees for teamwork, recommended within the frames of RCT. Especially in an onboarding setting, to not only focus on the prevalent task that the new team member will conduct, but also aim attention to how the member is welcomed to the group and introduce them to the processes of coordination., so that the team can achieve higher productivity by establishing beneficial communication, shared goals, shared knowledge and mutual respect (ibid).

Onboarding new team members using solely ICTs is challenging, but also do-able (Thomas, 2010). However, looking towards the Wheelan (2016) model for group phases, more

significance is put on individuals' relationships within a team. The difficulty in joining an already ongoing team that already has established behavioral norms and communication skills (Kauffmann & Carmi, 2017), is not discussed in the model. Looking at other sources, for example Assudani (2005) declares that mutual knowledge is best created between dispersed team members if they have already established informal relationships between themselves, but not necessarily by face-to-face interaction. However, it may be assumed that chat and email are not sufficient as only tools for the purpose of achieving a cohesive team (Desivilya et al, 2010). Only utilizing ICTs might end up damaging the open work climate once created between team members, or even hinder it from emerging at all in teams with new members, and thus risk deteriorating work processes and results. Altogether, when onboarding new team members during remote work, and only having access to ICTs, both communication structures that ease coordination as well as the social aspects of team building should be prioritised according to previous research.

#### **6.4. Team resources**

As previously stated, our informants repeatedly mentioned their already established great team spirit, or at the very least mutual respect for each other. Several team members had worked together for a couple of years and already established personal relationships and an informal way of communicating. In relation to the Wheelan model (2016), all three teams can be categorized by us, as external assessors, into the stage of either Trust & Structure (stage 3) or Work & Productivity (stage 4). Team members expressed in interviews that heated conflicts are rarely encountered, as is common in stage two; Counterdependency & Fight. Instead, mutual trust is already created, a task focus is prevalent and rare conflicts are handled in a constructive way, as expected in the stage of Trust & Structure or Work & Productivity. However, the Wheelan model is an example of an approach adhering to the relational branch on team effectivity, as presented by Runsten (2011), meaning that personal relationships within the team is viewed as an important factor in reaching full potential. Drawing insights from the general perceptions of the relational branch - that teams' performance can improve if the team members' social relationships improve - this is an area that HR and management need to engage in post-pandemic as well. Remote work has indeed affected our informants, expressed by them as longing for social interactions in work-related settings. Employees may need to reconnect with colleagues and boost their team spirit (Caligiuri et al., 2020), making up for the fact that such activities to a large extent have been cancelled for over a year.

Turning to the resource and management branch of research about team effectiveness (Runsten, 2011), it is instead the team's conditions that determine their success, rather than members' personal relationships. Such conditions and resources include but are not limited to coaching leadership, membership stability, clear objectives and a supporting environment (Hackman, 1987). A positive resource within the case company team are their clear objectives, created together during coordination meetings or sessions, according to the informants. Further, at least one informant in each team points out that their supportive manager has been a contributing factor for maintaining team cohesion or creating a successful onboarding experience for them as a new team member during the pandemic. Thus, relational leadership is an example of good organisational structures that support coordination according to RCT (Bolton et al., 2021). However, a differing prerequisite for our interviewed teams is the one of team membership stability. Teams that have received a new member during remote work have had a more difficult time creating team spirit and aligning towards mutual goals, as expressed by an informant. In the future, when new team members join, this can beneficially take place meeting colleagues in person to quickly establish trust (Espinosa et al., 2015) and be introduced to the group's norms (Wheelan, 2016).

#### **6.4.1. Activity-based office space**

A joint factor and resource for the three teams seems to be their previous environment, supporting collaboration when co-located. Nevertheless, this environment is now experienced as 'threatened' by the introduction of an activity-based office space after the pandemic, since not ensuring that team members can sit closely to each other in their daily work. Some informants expressed the concern that this type of environment could inhibit their work process within the team, namely being the opposite of a resource. On the one hand, a shared space with team members has shown to be beneficial for coordination, both being enforced by the factors of relational coordination, as well as reinforcing them (Bolton et al., 2021). According to our informants, having an office together with their team members has facilitated cross-talk and several beneficial aspects, supporting the theoretical framework in this sense, by e.g., improving communication and contributing to shared knowledge. However, the apprehension to the rumored activity-based office might, also according to theory, not be such an inconvenience to coordination. Namely, the authors (ibid) mention 'work process interventions' for establishing better relational coordination: (1) assess current state, (2)

identify desired state and, (3) experiment to close the gaps between these. HR and management can gain insight from the three steps when planning for the future workspace. Firstly, the current state, working solely dispersed when still following the Governments' guidelines, offers insights about what works and what is less beneficial during remote work - this thesis being a contributing puzzle piece. Secondly, the desired state may be to e.g., improve collaboration between functions, be a more innovative organisation, offer employees the choice of working from home permanently and train leaders to become more relationally focused etc. Thirdly, when the desired state is envisioned, structures and activities to enforce it can be experimented with, such as implementing an activity-based office. Thus, RCT both advocates for shared spaces for team members, which still could be achieved even when not sharing an office together (by simply sitting together anyway), while still supporting the activity-based office in this case, by for example creating shared knowledge and problem-solving communication between functions and even establishing mutual respect, since there is some frustration between departments, indirectly stated by our informants. Potentially, if employees feel uncomfortable asking for assistance outside of their teams (Hansen & Løvås, 2004), activity-based office spaces might be a possible solution in this case, by striving to extend the cross-functional relationships and improve problem-solving between different teams, reducing the barrier for employees in order for them to more easily ask for help outside of their original team. However, as Runsten (2011) warns for, team members in high knowledge complexity - which our case company is an example of - can face more difficulty in building strong team identities and internal relationships since tasks require them to participate in several settings, which could now be enforced. There are evidently both favorable and unfavorable aspects of an activity-based office in the case company, making this shift difficult to categorize as a resource beneficial to teams or not.

## **6.5. Disagreements and conflicts during remote work**

Goñi et al. (2020) showed that lower levels of conflict during remote work might actually have been due to conflict avoidance. The authors underline how avoidance of task conflict over time might also deteriorate learning. For our informants, conflicts or smaller disagreements have never been frequent, but if occurring, accepted as a part of collaborating and improving work results. Disagreements have however been experienced as decreased in frequency during remote work, when only using ICTs. Thus, this might possibly affect learning and work results negatively long term. This hypothesis is presumably on account of less knowledge-sharing if

constructive discussions decrease in frequency, subsequently leading to stagnated communication; not inviting innovative or creative ideas to be shared.

The assumption by Mortensen & Hinds (2001) - that geographically distributed teams would face more conflicts than co-located teams - was not evident in their research. This may be due to the fact that the geographically dispersed team members are forced to focus on the task to a greater extent, rather than getting into conflicts. As previously stated, our informants did not experience a great number of conflicts when working remotely. This can partly be owing to them not interacting with each other to the same extent anymore, something mentioned by some informants themselves. As Jordan (2019) discloses in the definition of conflict, disagreements stem from frustration within one party, when their needs or wishes are hindered by another party. In this case, such frustration may simply not arise due to working at a distance and not interacting in person, as when co-located. Employees are not as exposed to e.g., bad attitudes, which may be experienced as frustration evoking, and therefore frustration is not as common during remote work. So, less conflicts may be owing to colleagues not meeting up to the same extent and thereby not being able to get on each other's nerves, as well as them possibly working more focused and productive at home; not having the energy to pay attention to other people's different ways of performing their work.

### **6.5.1. Conflict prevention**

The importance of informal communication in order to gain an understanding of the work of others can certainly be a part of preventing a conflict from escalating (Kiesler & Cummings, 2002). When co-located, the teams, to various extent, used to initiate meetings with some personal conversations to catch-up, and when working remotely implementing some digital meetings in order to coordinate within the teams. These examples on current and prior team coordination activities may function as tools for conflict prevention. However, this alone can't be assumed to prevent conflicts in the long run. Also, the challenge of interpreting silence when working remotely and only using ICTs (Cramton, 2001) is an aspect which has been mentioned as somewhat hindering by some informants, which may have affected the quality of the discussions in some situations and thereby is an obstacle in achieving full potential in the daily collaboration. Therefore, the need of meeting face-to-face is not just about being able to discuss more easily, but in reading facial expressions and knowing when eventual misinterpretations and misunderstandings occur.

Desivilya et al. (2010) emphasize the importance of encouraging constructive and collaborative communication patterns in a team for preventing conflicts, improving innovation, as well as the quality of the internal relationships within the team. Members showing an interest in building healthy relationships within their teams were more likely to achieve such efficient collaboration (ibid). Our informants highlighted the fact that they perceived their communication and group climate as well-functioning, open and respectful. They underlined having mutual respect, and when facing smaller disagreements, they strived to discuss it with respect to everyone's opinions and wanting to reach consensus or mutual agreement. It can be assumed this is partly based on the team members' established personal relations prior to the pandemic, as well as their collaborative group climate. Therefore, the low rate of conflicts mentioned by the informants might be owing to the teams' respectful work climate and good internal relations, rather than deliberate actions to prevent conflicts.

However, one of the teams is estimated to not have established reinforcement when it comes to mutual goals and shared knowledge in RCT, described by Gittell (2012). As described by informants, there is a lack of awareness of each other's work, not frequent- and accurate communication or that many shared and team-specific goals. Overall, it may be assumed that this team has stagnated somewhat by not evolving their communication and coordination in general, since they are not forced to be interdependent as a team. Over time, this particular team may not have an effective conflict prevention from the perspective of RCT. However, looking at the collective unit branch of research about effective teams (Runsten, 2011), they may still perform well within their tasks, even though conflict management could have better prerequisites. Shared perceptions about for example the team roles can still be achieved, although shared knowledge of what everyone *does* on a daily basis is not. There are even benefits of not having strong internal relationships, in combination with mutual respect and accepting differing opinions; the risk for groupthink is reduced (Runsten, 2011; Gittell, 2012).

Within the case company, frustration between functions is more common than within smaller teams. Kraut et al. (2002) describe how physical proximity can help improve coordination within a team, since they are able to locate problems easier when working side by side. Thus, frustration between departments may be due to coordination issues arising easier between the different teams because of not being able to have insight in each other's daily work - either when co-located or when working remotely. Alas, this is a structural challenge on organization

level, rather than only depending on e-collaboration. Perhaps, when working co-located again and in a shared office space (Gittell, 2012), these issues can partly be prevented with cross-functional cross-talk and informal discussions, which previously have had a positive impact on smaller teams' conflict prevention. Hence, it may be relevant to implement some organizational work practices (Bolton et al., 2021), thereby not only placing the responsibility on each individual, but on the organization as well, hopefully resulting in clear and definite guidelines preventing misunderstanding and structural issues arising on a team-or individual level.

## **6.6. A hybrid model for conducting work**

As presented in the findings, informants from our case company unanimously hope for the possibility to divide their work time between the office and remote work in the future, although in some varying formats. This is in line with Cheng's (2017) findings about individuals' higher benevolence to remote work if having past experience with it. All informants agree that when visiting the office, they would most benefit from seeing their team members in person. In this wish lies the already-mentioned apprehension towards a shift to an activity-based office. Both remote work and a possible activity-based office space could entail the necessity of communication using ICTs. Barber & Santuzzi (2015) have observed the risk of some employees experiencing stress due to perceived demands of being available to a higher extent, answering messages and emails after office hours, or in higher volumes during the day (Bordi et al., 2018). As previously discussed, dispersed team members need to be available more than co-located ones, when only having the option of using ICTs for communication. Hence, benefits of increased work life balance - as a potential result of divided work weeks between the office and remote work - need to be weighed against the risks that higher flexibility entails for employees.

Considering that our case company is global, we believe that especially they, and other businesses in the same situation, need to reflect about team composition in the future; now knowing that geographically dispersed team members encounter more difficulties with coordination, but might, however, be more task focused. Having employees all around the globe enables the organisation to consciously create the most efficient and well-functioning assembly of team members, at least on paper. However, if they are not from the same country, they cannot be co-located and only occasionally meet face-to-face. This study sheds light on the issue of working remotely for a limited time, but also having on-going dispersed teams. All

in all, there are benefits to both returning to be co-located, as well as preserving some forms of dispersed teams in the future.

### **6.7. Managing uncertainty**

This study confirms several VUCA-conditions being faced and partly conquered by the case company, by managing daily coordination and continuation of performing successful work results within the teams, even during a global pandemic. However, Cohen & Bailey (1997) bring attention to the phenomenon of team members to judge their results higher if they experience good internal relationships, meaning that this assessment of maintained work results may not be completely objective by our informants.

The result of this study also indicates what Waizenegger et al. (2020) described as co-workers being brought closer socially together when working remotely. Many informants mentioned using chat as a forum during the furloughs as a way of keeping in touch and checking in with each other. They were able to bond over their common insecurity of being in the same situation, supporting one another, as well as maintaining frequent communication. This may very likely be due to the close relations formed when co-located, the favorable work climate and the previous customisation of using ICTs. As Espinosa et al. (2015) discovered, crises that affect teams are by a majority caused by external factors, rather than internal turmoil. Hence, COVID-19 is an example of this as well as good coping skills and conditions within the teams, using tools such as chat and also having created a good work climate previously. The pandemic's effect might even have led to employees being brought socially closer, although not confirmed in this study since many informants described being socially close already pre-pandemic.

Organizations will not only have to prepare for uncertainty, but also challenge their traditional ways of executing daily operations, in order to still be competitive (Schoemaker et al., 2018). Managing uncertainty is not going to be a rare occasion, but rather a challenge for the continuous future. Although e-collaboration may not again be necessary due to a pandemic in the near future, familiarizing organizations with the VUCA conditions (Whiteman, 1998) and how to conduct business in such a world will be a prerequisite for future survival on the global market. To further prepare their organisation, HR may see it as their mission to create and improve structures for supporting important business aspects, such as collaboration within their organisations. Siemens et al. (2011) strongly recommend prioritizing good communication

processes in order for the team to gather around common goals and improve their team spirit. One example in our case company of a phenomenon that today might inhibit beneficial communication for easier coordination is the prevailing 'meetings culture'. Perhaps there is a way to achieve frequent, timely, accurate and problem-solving communication (Gittell, 2013), while still not booking each employee's calendar full of video calls. According to Espinosa et al. (2015), lack of time is a major cause for incapacity to handle crisis within a team, which is the case when meetings follow one another, disclosed by our informants. In line with RCT, the negative side of coordination aspects is reinforceable too, meaning that once low-quality communication is established, that can downstream lead to low-quality relationships between team members (Bolton et al., 2021). As an example, the previous cross-talk is now lacking during remote work and accurate communication is more difficult to manage, since delay due to full calendars makes it difficult to get a hold of the right people in the case company. Thus, to be better prepared for future crises, HR can lay the foundation for better communication structures, in order for teams to easier maintain good collaboration.

## 7. CONCLUSIONS AND RECOMMENDATIONS

*This chapter aims to summarize the previous chapters, in order to draw conclusions about our case study. Further, we offer some recommendations for organisations and HR departments in a similar situation to the case company. Our research questions, as a reminder, are: (1) What experiences do team members have of their internal collaboration, regarding the shift from on-site to e-collaboration? (2) Which changes in work practices have been experienced as unfavorable in terms of supporting collaboration? (3) Which changes in work practices have been experienced as favorable in terms of supporting collaboration?*

1. In the case company, the number of meetings was already high. However, meetings replaced face-to-face interactions during the pandemic and thereby increased. Chat and email especially have become a substitute for face-to-face communication but may not be a better tool for communicating in all contexts. Informants have witnessed difficulties in depending solely on ICTs for communication, e.g., to find time in each other's calendars for the necessary check-ins and experienced stress due to unclear boundaries for availability.

***Recommendation:***

Simply, we recommend preserving systems that work, such as posing quicker questions in chat forums. Digital meetings can advantageously be shorter in time, since attention span among participants sometimes is lower than in face-to-face gatherings. The factors of increased stress and expectations about availability are areas that the HR department might consider priorities - and may experiment with solutions for - in case of a future that embraces some form of continued remote work. We would recommend establishing a fairly detailed company-wide policy and guidelines for remote work and ICT usage.

2. Introducing new team members during remote work has been somewhat challenging regarding creating social relationships within the team. Alas, ICTs are not the best tools for creating mutual trust, cohesion and joint goals. However, teams have succeeded in maintaining sufficient productivity levels which may be due to functional coordination, despite the lack of physical interactions during remote work.

***Recommendation:***

Solely using ICTs within teams risks putting *too much* emphasis on coordination, while losing useful and productivity-improving social relationships between members; achieving a balance is desirable. When onboarding, and in continued team collaboration, face-to-face elements in collaboration-improving activities, and in daily work, should be encouraged when possible.

3. Few conflicts or disagreements have occurred during remote work when using ICTs. Also, since the informants have more focus on the task rather than each other's way of conducting their work, they tend to feel more focused when working remotely. The lack of discussions based on non-mutual opinions can however inhibit the learning because of decreased knowledge sharing.

***Recommendation:***

Constructive discussions are more easily achieved when working co-located, since face-to-face conversations tend to raise differing opinions. Nevertheless, this is not a recommendation to extend the number of conflicts within the teams, but rather to encourage discussions about differing opinions to be positively received rather than something to fear, even in a digital climate.

4. The lack of cross-talk and difficulties interpreting silence can affect the coordination within and between the teams when working remotely, causing otherwise easily solved issues leading to coordination problems in some cases. This mainly seemed to be a problem cross-functionally, leading to disagreements or smaller conflicts due to lack of insight into each other's work situations.

***Recommendation:***

The already recommended policy for remote work should include expectations for ICT usage, i.e., within which time span to answer emails etc., to counteract the problem of digital silence. Also, HR may initiate formulating organizational work practices in order to prevent misunderstandings and structural issues from arising both cross-functionally and within the teams. Coordinating activities should be prioritized (e.g., shared information systems).

5. A concern about returning to office-conducted work and being faced with a shift to an activity-based office was raised among some informants. Such an experiment might

bring both favorable outcomes (e.g., facilitating coordination and collaboration cross-functionally, resulting in more efficient problem-solving and conflict prevention) and unfavorable effects (e.g., inhibited collaboration within smaller teams due to less cross-talk and quick questions, alas maintaining the reliance on ICTs that remote work has entailed, as well as generally receiving resistance among employees since changes are often initially dis-liked).

***Recommendations:***

The experiment of activity-based offices can be carried through, but the reason for introducing such an arrangement should almost extensively be communicated to employees. It will become important to take into account feedback from employees along the journey and be open for adjustments if necessary (e.g introducing bookable collaboration spaces).

HR could simultaneously consider alternatives for the current ‘meetings culture’ within the company, since the purpose with an activity-based office assumingly is for employees to be more dynamic and available for colleagues. However, our results point to an already high availability for meetings due to the current company culture. Alas, being available both for booked meetings and sitting physically available in an activity-based office may inhibit deep concentration on individually focal tasks. Also, a strict meetings culture opposes the very purpose of an activity-based office; namely to increase knowledge-sharing and problem-solving when reaching colleagues more freely throughout the organization, without having to book a meeting. Therefore, we suggest implementing either some hours of the day to be meeting-free (e.g., 8-9am and 4-5pm, which some teams already follow) or an afternoon per week.

6. There are advantages in working both remotely as well as co-located, and the future will inevitably continue to bring major challenges; being prepared and flexible in the way of thinking and acting might seemingly be the best way of handling the future VUCA-conditions. In connection to our study, this raises the question of how to compose teams in globally operating companies, in the future. Increased focus and less disturbances is experienced when working remotely, while improved communication face-to-face and evolved group discussions and cross-talk is perceived as valuable when working co-located.

***Recommendation:***

We would encourage companies wanting to be acknowledged as attractive employers to consider introducing a hybrid solution regarding where to conduct work from in the future. It is possible to reap the benefits that remote work has proven to bring, while reverting to co-located collaboration elements for such activities best performed face-to-face. However, the question of on-going dispersed teams - which is the case of global teams constructed by international team members - remains. We would suggest that permanently dispersed teams get the opportunity to initially establish social relationships between members, to facilitate coordination activities such as frequent communication subsequently.

### **7.1. Main contributions**

The main contribution of this study is to bring insight into a historically unique situation; organisations regardless of industry being forced, or strongly recommended, to conduct remote work for an initially unforeseeable future. We bring insights about what team members have experienced as favorable and unfavorable during this time, and therefore how the following ‘new normal’ may be beneficial to companies and employees by preserving work practices that have proven favorable. Thus, we believe to have contributed with guidelines for how to shape an HR strategy for facilitating teams’ e-collaboration onwards.

Another contribution of this study is responding to Runsten’s (2011) request of conducting research about authentic teams, conducting their real work, in less examined settings as previously made (e.g military and higher education studies). Our focal point has indeed been white-collar workers in a high knowledge-complexity company. Also, we respond to the same author’s call for research from an employee perspective, rather than the most commonly researched management view.

This study confirms extensive theoretical theories regarding the importance of role relationships and frequent communication for successful collaboration (Gittell, 2012), as well as group phases’ impact on team productivity (Wheelan, 2016). Further, we expand the Wheelan model into a context of virtual collaboration, which is a way it is not originally applied. However, our study mainly establishes that internal relationships between team members contribute to maintaining high team efficiency during e-collaboration, therefore confirming the relational branch of research (Runsten, 2011).

## **7.2. Future research**

This particular study focused on communication, collaboration and digital tools for working remotely during a pandemic. However, future research may examine to what extent mental health among team members, and their ability to handle crises individually, might affect the team dynamic and their performance as a group.

This study has indeed taken an employee experience perspective. Therefore, future studies may examine exactly to what extent the pandemic has affected the productivity and work results, e.g., by conducting a quantitative study for more tangible results, measuring the factor of productivity. Also, how much importance has e.g., daily cross-talk when co-located, or reading facial expressions when communicating remotely, ultimately on team collaboration. These factors could beneficially be measured, instead of only interpreted by experiences.

There will be a post-pandemic way of organising collaboration, as society slowly manages to enter the so-called ‘next normal’ and businesses more freely can choose how their employees conduct work, after involuntary working remotely for over a year’s time. The scope of this study ends where the next normal begins, having evaluated the forced remote work. Future research may therefore pick up here, conducting studies of how-to best construct hybrid models for working interchangeably from an office and from home, in different settings of organisations and collaboration prerequisites.

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# APPENDIX

## APPENDIX 1: INTERVIEW GUIDE

### Team structure

- Describe your work team's structure (number of people, roles, time working together)?
- Who leads your team (informal leader / formal manager etc.)?
- What contacts does your team have (other teams, customers, departments)?
- Describe your work team's mission (goals, areas of responsibility, function in org)?

### Role

- What is your job title?
- For how long have you worked in the company?
- How long have you been part of your existing team?
- What function/area of responsibility in the team, does your role have?
- Which people / roles do you collaborate with in your work?
- What are your work tasks?
- What percentage of these can you perform without the involvement of your team members?
- To what extent are you dependent on a well-functioning collaboration within the team to achieve this? In what ways?

### Collaboration before COVID-19 (co-located)

- How did you communicate within the team (how often, which topics, why, which forums)?
- How did you think this worked out?
- How were meetings within the team conducted (how often, what subjects, why)?
- How did you think this worked out?
- What promotional activities for collaboration did the team engage in (what did you appreciate doing with your team members)?
- What is your experience of how you treated each other within the team (tone of voice, jargon etc.)?
- What is your experience of any collaboration difficulties within the team (topics, certain situations, certain people / roles, other occasions)?
- How did you experience that any cooperation difficulties were handled?
- Were there issues and situations that could not be resolved easily?

### Collaboration during COVID-19 (e-collaboration)

- How do you communicate within the team today (how often, which topics, why, which forums)?
- How do you think this works out?
- How are team meetings conducted today? (how often, what subjects, why)
- How do you think this works out?

- What is your experience of how you treat each other within the team today (tone of voice, jargon, difference now when you work remote etc.)?
- What is your experience of any collaboration difficulties within the team, now that you work remotely (subjects, certain situations, certain people / roles, other occasions)?
- How do you experience that any cooperation difficulties are currently handled?
- Are there issues and situations that cannot be resolved easily?

#### Favorable

- *What do you think works good in your team collaboration today?*
- *What improvements in cooperation have arisen since the transition to e-collaboration?*
- *What collaborative activities has the team been engaged in since the transition to distance (what do you appreciate doing with your team members?)*
- *What possible positive outcomes have you seen in your work result (project / finished products etc.) since shifting to e-collaboration?*

#### Unfavorable

- *What do you think works less well in your team collaboration today?*
- *What possible negative outcomes have you seen in your work result (project / finished product etc.) since shifting to e-collaboration?*

#### **Collaboration post-COVID-19**

- In what way would you like to collaborate within the team, in the near future when you do not *have to* work completely remotely?
- What have you experienced that is so beneficial with the remote work that you want to continue with it (e.g., communication channels, meetings, activities, etc.)?
- What have you experienced as negative with the remote work, i.e., something you would rather see the team change / return to, that existed before the pandemic?

#### **End**

- Is there anything you want to add within the topic of the conversation that you do not think has come up yet, that you think could contribute to our study?
- Is it possible to contact you via email if any follow-up questions arise when we analyze the material?