



Virtual teams, the new norm?

A study on the effects of becoming a virtual team.

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A large, faint watermark of the Uppsala University seal is visible in the bottom right corner of the page. It features a circular design with a sunburst in the center and the words "UPPSALA UNIVERSITET" around it.

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Abstract

The COVID-19 pandemic has ensued a wave of work teams making the shift from the office to working entirely virtually. At the centre of this shift are the people. The people are at the heart of any team, and thus this thesis sets out to create a greater understanding of how the leaders and members of three project teams have fared with the shift from working collocated too virtually. Three interviews consisting of one leader and two team members were conducted per team, totalling nine interviews. The empirical findings were analyzed through the lens of a theoretical framework with a focus on uncovering why, how, and what implications the effects of virtuality have on various team processes. The results show that most challenges pertain to the increased autonomy of team members created by using ICT, and that the role of leadership has been heavily affected with a clear preference for task-focused leadership with relationship- and trust-building not being deemed critical. Multiple team processes have all been affected to a greater or lesser extent, with team members finding themselves having to deal with new requirements being imposed on them as part of the shared leadership that is taking form.

Keywords: *virtuality; team processes; virtual leadership; virtual teams*

Sammanfattning

COVID-19 pandemin har lett till att flera teams har gjort övergången från att arbeta på kontor till att arbeta helt virtuellt. I centrum för detta skifte är människorna. Människorna är kärnan i alla team, och därför avser denna uppsats att skapa en större förståelse för hur ledarna och medlemmarna i tre projektgrupper har påverkats av denna övergång från samlokalisering till virtuellt arbete. Totalt utfördes nio stycken intervjuer, tre per team som i sin tur bestod av en ledare och två medlemmar. De empiriska resultaten analyserades genom en teoretisk ram med fokus på att avslöja varför, hur och vilka konsekvenser effekterna av virtualitet har haft på olika teamprocesser. Resultaten visar att de flesta utmaningar är relaterade till den ökade autonomin hos medlemmarna som skapats genom användningen av IKT. Ledarskapets roll har påverkats kraftigt där en tydlig preferens för uppgiftsfokuserat ledarskap har utkristalliserat sig, med relations- och förtroendeskapande inte av hög prioritet. Flera teamprocesser har påverkats i större eller mindre utsträckning, i synnerhet de krav som ställs på medlemmarna som en del av det delade ledarskapet som tar form.

Nyckelord: *virtualitet; teamprocesser; virtuellt ledarskap; virtuella team*

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1. Introduction

As a result of the COVID-19 pandemic, organizations worldwide have been forced into adopting new ways of working because of different restrictions and regulations put in place to reduce the spread of the virus (Richter, 2020). Driven by advances in information and communication technology (ICT) and the available digital infrastructure, many teams have made the shift to work completely from home and thus virtually (Maduka et al., 2018). ICT is a broad term that refers to all communication technologies, including everything from the internet itself to software (AIMS, n.d). By fully adopting ICT to enable working virtually, interactions and communication between individuals becomes mediated by technology. A virtual team is characterized as having these two elements being mediated by ICT, but also as a collective unit that works towards common goals, whilst also being geographically dispersed (Gibson & Cohen, 2003). During the period of the COVID-19 pandemic, people have become more adept at this way of working by developing new routines and habits (Richter, 2020). Virtual teams have therefore been vastly popularized, and many teams aim to continue working virtually to some extent, even after the COVID-19 pandemic is over and they are free to go back to their offices (ibid.). The question of how working virtually will impact teams is thus becoming an area of both greater discussion and interest.

1.1 Background

As Samantha Bufton writes for Forbes (2021), the employment of virtual teams also brings with it its challenges, “With the continued remote work model, there’s equally a growing need for connection across technology.” Technology is hailed to be able to unearth new opportunities to collaborate and increase productivity, but the human element still must be considered. Tech giants such as Spotify, Google, Amazon, and Salesforce are looking to lead the way in maintaining virtual teams as a way of working in the long-term, aiming to get the most out of the technology whilst at the same time also focusing on developing the individuals who use it (Forbes, 2020).

In recent years, the interest for understanding human behaviour within team contexts has increased, not least in regard to the increasing number of virtual teams (Forbes, 2021).

Therefore, interest has also grown in understanding the various complex team processes that continuously evolve, and not only in evaluating quantifiable, business-related outcomes such as efficiency and performance (Iligen et al., 2005). By studying previous collocated project teams that have been forced into working virtually due to the COVID-19 pandemic, we hope to find new insights and an understanding how this change has affected project teams. Our thesis intends to contribute to this growing domain of research aimed at creating an increased understanding for how and why virtual teams behave as they do. Thus, we will attempt to shed new light on how working virtually has affected team processes.

1.2 Problem statement

The exponential increase in the number of teams now conducting their day-to-day operations virtually during the COVID-19 pandemic is something that according to both industry leaders and scholarly experts is here to stay long after the regulations imposed by the pandemic are gone (Richter, 2020). Thus, virtual teams are likely to become an established way of working in the coming years. Understanding how key factors pertaining to virtual teams such as leadership, trust, development of social relationships, and how the team behavioural processes change in the virtual setting are therefore more relevant than ever. By studying the team processes of virtual teams, this thesis can contribute to a greater understanding of what leadership behaviour is preferable in virtual teams and how the aspect of virtuality needs to be considered to achieve a virtual team that is both satisfied and productive. Thus, this thesis can add to a growing body of research by studying virtual team, leadership, and ICT in relation to virtuality.

1.3 Aim & research questions

The aim of this thesis is to study how project teams that prior to the COVID-19 pandemic were collocated with no previous experience of working virtually, have had their team processes affected by virtuality. Leadership in relation to the team processes are of great interest, to create a better understanding of the needs of virtual teams, and what effect virtuality has on them. By understanding how different team processes are affected, insights that are useful for the future and wider implementation of virtual teams can be extracted.

The thesis research questions:

- How has working virtually affected the team processes of previously collocated project teams?
- And what role does leadership play in virtual teams?

1.4 Delimitation

Due to the broad scope that virtual team research entails, the following delimitations have been set to narrow the scope of this thesis:

This thesis' focus is to explore and expand the research of virtual teams. There are several constellations of teams working towards common goals, but a common one is the form of project teams. A project team is a collective of individuals fulfilling a certain objective within a set start and end date (Munns & Bjeirmi, 1996). This thesis chooses to study project teams, as to shift the focus from the workplace to a smaller social unit. This thesis specifically intends to study project teams that prior to the COVID-19 pandemic worked collocated, and then fully made the shift to virtual teams and fully adopted ICT as a mediator for communication and interaction. Thus, this thesis does not intend to study globally dispersed teams, teams that have previously worked virtually, or the wider organization's relation to the virtual shift of the team.

2. Literature review

This literature review aims to introduce the reader to the state of research on virtual teams and to create an understanding of the nature of virtual teams. By doing this, the unique challenges posed to virtual teams and their leaders can be laid out more precisely. As the aim of this paper is to study virtual teams, their team processes, and the leadership exhibited, focus in this section is on presenting previous research that has studied virtual teams, and the challenges and attributes emblematic of virtual teams for leaders and team members alike.

2.1 The virtual team

The adoption of virtual teams on a wider scale is still ongoing, and so are the definitions that are capable of encapsulating what a virtual team *is*. One that has received wide consensus from researchers is put forth by Gibson and Manuel (2003), describing virtual teams as characterized by three elements: a functioning team that is viewed as a collective unit that works towards common goals; members who are geographically dispersed; and their interaction relying entirely on ICT. The research of virtual teams is on the rise as their adoption has accelerated, even before the forced shift to virtual teams amid the COVID-19 pandemic (Zeuge et al., 2020). The research of virtual teams has predominantly focused on: virtuality as a contingency factor (Schaubroeck & Yu, 2017); the ideal composition of virtual teams (Dulebohn & Hoch, 2017; Hertel et al., 2005); and how leaders must adapt to lead effectively in a virtual setting (Espinosa et al., 2006; Liao, 2017; Staples et al., 2008). Martins et al. (2004) urge researchers to generate a more nuanced understanding of virtual teams by looking at “‘team-ness’ in concert with ‘virtual-ness’” (ibid., p. 808). By understanding the locational, temporal, and relational boundaries explicitly tied to virtual teams, research can discern how challenges tied to team behaviour intermix with the virtual aspect of their work (Cascio & Shurygailo, 2003; Lee-Kelley & Sankey, 2008; Müller & Turner, 2007).

Research has shown virtual teams to be prone to the *technology fallacy*, where all hope is placed on the ICT to solve all challenges and automatically raise productivity (Kane et al., 2019). To mitigate this problem of placing too much trust and responsibility on the technology itself, virtual teams demand of both its members and leaders to exhibit certain abilities and skills

(Minas et al., 2014). The *technology paradox* builds on this, describing ICT as something that by itself cannot add value, and that it is first when it is impacted by various factors, such as the way in which the human user uses it, that ICT can start generating value (Bruque & Medina, 2002). If the members of a virtual team exhibit a high level of technological competence amongst its members, it not only is able to aptly deal with challenges posed by the technology itself, but is also more likely to be able to create trust and collaborate through the use of technology (Martins et al., 2004). Technological competence not only entails the knowledge of how to work with ICT, but a broader familiarity and ability to navigate the digital landscape and workplace (Wang & Haggerty, 2011). Thus, if there is a lack of technological competence within a virtual team the challenges posed by the virtual setting such as the creation of trust and cohesion are intensified (Nydegger & Nydegger, 2010). Wang and Haggerty (2011) also found a correlation between an individual's technological competence and their job satisfaction and performance. This further implies a consensus within the research area; that technical competence is of the utmost importance for virtual teams, and not only in direct relation to the use of technology, but also with its effect on performance and satisfaction (Minas et al., 2014).

2.2 Leadership in virtual teams

With the nature of virtual teams, new forms of leadership arise where virtual team leaders must lead their members entirely using ICT (Gibson & Manuel, 2003). Thus, leaders of virtual teams rely on the technology to influence attitudes, behaviours, feelings, and thoughts within the team to achieve the team's goals (Lilian, 2014). In virtual teams relationship building between members is not as natural and leaders of virtual teams need to actively facilitate these processes, while in traditional teams this is often taken for granted due to the physical context where this occurs more organically (Liao, 2017). According to Lilian (2014) the fundamental leadership goals are the same in virtual as in face-to-face teams, and leaders still need to create vision, motivation, and trust within the team. Hence, virtual teams leaders' basic competencies have not changed from traditional leadership but rather it is the method used for achieving the goals that have changed. With the heavy reliance on technology as a method to communicate and manage virtual teams to achieve their goals, leaders of virtual teams face new challenges to overcome the constraints of technology. The technology constrains communication by reducing its richness due to the absence of non-verbal and social cues such as facial expressions, gestures,

and voice inflections which makes social processes harder to facilitate (Bartsch et al., 2020; Newman et al., 2020). Therefore, leaders of virtual teams are often required to invest large efforts to manage their virtual teams successfully. To overcome these challenges, virtual team leaders require additional competencies and behaviours to lead in a virtual setting (Chen et al., 2007; Dulebohn & Hoch, 2017; Langfred, 2004).

With technology being a conditional factor for the existence of virtual teams, technology itself receives a lot of attention within the research of virtual teams. The usage of ICT and what technology is chosen, is an essential part of a successful virtual team but a virtual team is like any other team, a social system. The choice of ICT will not matter if the virtual team does not communicate effectively and use the available information to work together to achieve their goals (Nydegger & Nydegger, 2010). Therefore, the challenges that arise for leaders of virtual teams are quite similar to the challenges that traditional leaders face, but challenges regarding relationship building, technology, and communication are especially difficult for leaders of virtual teams as they are exasperated in the virtual setting.

2.3 The challenges of virtual teams

The volume of research into the advantages and challenges facing leaders of virtual teams has increased in recent years (Carte et al., 2006; Espinosa et al., 2006; Lilian, 2014), something that can be seen as a natural consequence of the exponentially increasing number of teams choosing to work virtually (Zaccaro & Bader, 2003). Virtual teams face a multitude of different challenges, but with some recurring themes that are often encountered within the research of virtual teams and leadership.

In literature regarding virtual teams, communication is frequently mentioned as one of the biggest hurdles facing leadership attempting to achieve a successful virtual team (Lilian, 2014; Maduka et al., 2018; Marlow et al., 2017; Newman et al., 2020; Nydegger & Nydegger, 2010). According to Newman et al. (2020), the communication within virtual teams lacks the same richness as experienced within colocated teams due to the absence of nonverbal and social cues such as facial expressions, gestures, and voice inflections. Maduka et al. (2018) also mentions this issue and expands on it, with that in traditional teams around 70% of the communication is

non-verbal, which then gets lost in virtual teams. Lilian (2014) as well as Nydegger and Nydegger (2010) have also recognized this issue of the lack of social cues that is so common in teams working face-to-face. This increases the frequency of misunderstandings and delays of information sharing within virtual teams, with the main cause being the limitation of the technology which constrains communication. Another aspect that affects the results of the communication is how the technology is applied within the team. Both Lilian (2014) and Newman et al. (2020) argue that to be able to communicate effectively the right technology must be applied according to the specific task and context. For example, when executing a complex task Newman et al. (2020) suggests using a synchronous communication technology to allow direct interaction, such as a video conferencing software which could increase the richness of the communication. Thus, it is important for virtual teams to select a suitable ICT dependent on the complexity of the task at hand, to achieve effective communication.

A factor that is deeply affected by the communication within a team is trust, with trust being defined as the extent to which individuals can rely on each other to deliver on their promises (Lilian, 2014). According to Newman et al. (2020) effective communication is heavily dependent on trust since with a higher level of trust the communication will be perceived more positively. Lilian (2014) highlights that trust is critical since it sets the expectations of team members. Trust is especially important in new teams where there is no prior familiarity amongst members, since it is hard to know what can be expected and what each member can bring to the group. Tseng and Ku (2011) as well as Nydegger and Nydegger (2010) propose that trust enables members to depend on each other and lays the groundwork for teamwork, since people that trust each other are more likely to collaborate. High levels of trust also counteract the heightened threshold for communicating within virtual teams, as it is positively correlated with seeking help and increasing collaboration (Van Waes et al., 2015).

Another critical aspect of trust that is frequently mentioned in the literature is that trust builds relationships which facilitate a general cohesion within the team (Lilian, 2014; Tseng & Ku, 2011). Nydegger and Nydegger (2010) argue that cohesiveness is highly related to the effectiveness of a team. A team with higher cohesion will feel more connected to each other and are more likely to perform better. One reason behind this increased performance could be because of the relation between cohesion and motivation that Lilian (2014) highlights. Lilian

(2014) suggests that with higher cohesion, team members will be more motivated since they have set expectations of what each member will provide individually to the team. Motivation is also connected to satisfaction according to Robert and You (2018). They argue that team members that are satisfied with their team are more committed to the goals and motivated to contribute to the team. When team members feel that their team values them and their efforts, the work becomes more meaningful which leads to higher satisfaction. With a higher cohesion where the team is more integrated this is more likely to occur. Team members' satisfaction is also related to the feeling of isolation and detachment where members in virtual teams feel left out due to reduced social simulation with their colleagues (Kirkman & Bradley, 2002). This decreased satisfaction can also reduce productivity (ibid). A satisfied team that is motivated and committed to the team's objectives are likely to achieve better performances according to Robert and You (2018). To conclude, trust lays a foundation in a virtual team and facilitates cohesion by acting as a glue that keeps the team together (Tseng & Ku, 2011). Thus, leaders of virtual teams should strive to build trust to facilitate cohesion that will motivate team members to contribute to the virtual team and its objectives.

With the communication within virtual teams lacking in richness, establishing trust between members is especially hard in virtual teams. Virtual team leaders should strive to achieve frequent communication of high quality to facilitate trust (Maduka et al., 2018). Newman et al. (2020) propose that leaders of virtual teams should increase their communication within the team to enhance relationship development, exchange of knowledge and information, and the overall effectiveness. With this the communication would be of a higher quality and increase the performance of the team. Nydegger and Nydegger (2010) confirms that the quality of the communication will have an influence on how effective the team is. Newman et al. (2020) also argues for clearer communication since it reduces misunderstanding and increases performance. Clear communication includes setting clear objectives for members, which helps them understand how well they perform and allows them to adjust their performance accordingly to the other members performance. Maduka et al. (2018) and Lilian (2014) also agree on the need of setting clear goals and objectives to clarify expectations of team members. Therefore, leaders of virtual teams must adapt their leadership to overcome these communicative challenges to achieve a more effective and functional virtual team (Rosen et al., 2007; Liao, 2019).

2.4 Incongruent perception of oneself and others

Previous research has found virtual teams to face multiple challenges different to those of face-to-face teams, with many of those originating from the use of channels of communication possessing lower information-richness (Dulebohn & Hoch, 2017; Maduka et al., 2018). This refers to the decrease and depending on the ICT used, sometimes complete inability of individuals to make use of body gestures, non-verbal cues, or other forms of communication rich in information that ICT cannot facilitate. Thus, the leaders who do manage to demonstrate good and effective use of communication technologies are more likely to be leaders of well-performing teams (Newman et al., 2020). What research has been able to uncover is that the misguided perception of one's own ability pertains not only to leaders but also to team members (Cheshin et al., 2011; Romeike et al., 2016). This has been linked to the fact that virtual teams operate in less interaction-intense environments where *social comparison*, the process of comparing one's own ability and position in relation to the rest of the team, more easily becomes misguided (Conner, 2003; Greenberg et al., 2007; Romeike et al., 2016). This process of determining one's ability relative to the other members in a group is essential to establish trust, reduce uncertainty, and determine the optimal ways of collaborating (Romeike et al., 2016). Due to the aforementioned lack of information at hand for team members as well as leaders of virtual teams, the risk of drawing biased conclusions regarding one's ability and role increases to that of face-to-face teams, and demands greater communicative ability of both leaders and members in establishing the correct roles and generating trust in virtual teams (Greenberg et al., 2007; Romeike et al., 2016).

2.5 Summary of literature review

Creating an in-depth understanding of the many facets of virtual teams is a challenge that is continuously undertaken by researchers with many aspects yet to be fully explored (Cheshin et al., 2011; Martins et al., 2004). What research has been able to uncover thus far is that virtual teams pose new challenges to both its members and leaders, while it also serves to aggravate challenges that for long have faced traditional teams (Hertel et al., 2005; Mathieu et al., 2008). Where challenges with communication, trust and cohesion seems most prominent in virtual teams and thus interesting for further studies. It has also been noted that leadership can generate vastly different performances on both a team and individual level, and that the team members'

perception of themselves and their leader can have a great impact on both team morale and effectiveness (Newman et al., 2020; Romeike et al., 2016).

3. Theory

This chapter presents the selected theoretical framework and other theoretical components applied in this thesis. The main focus is on the input-process-outcome (IPO) framework, the holistic systemic theory that will be used to identify and analyze factors central to the research question. For leadership of virtual teams, theory regarding what effect different approaches to leadership can have in virtual teams will be presented, to provide an understanding of what leadership of virtual teams entails.

3.1 The IPO framework

As we seek to study the behaviours exhibited by virtual teams, it is of great use to concretize and delineate the relationship between the actual behaviour, and what effects and causes it respectively. The IPO framework is built on this idea of causality and was first developed for the evaluation of outcomes such as performance or cohesiveness in collocated teams, as determined by the processes ongoing within a team who in their turn are affected by certain inputs (Hackman & Morris, 1975; McGrath, 1964). The IPO framework provides an overview of certain critical components that a virtual team is dependent on and the relationships between these components.

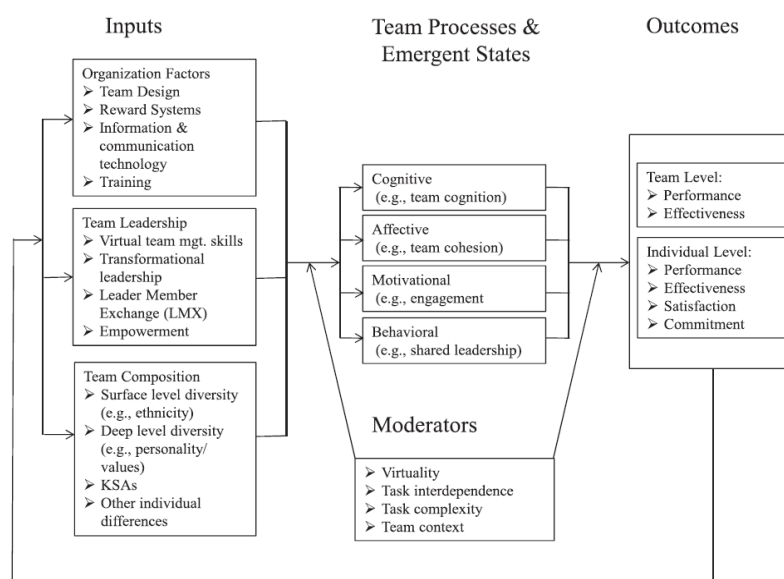


Figure 2. IPO framework of virtual teams (Dulebohn & Hoch, 2017, p. 571).

Dulebohn and Hoch's (2017) above depicted version of the IPO framework is a revised version of the original framework (Hackman & Morris, 1975), created for the research on virtual teams. Within the respective components; inputs, team processes and emergent states, moderators, and outcomes are one or several factors that often but not always, are present in virtual teams. These are based on the research of virtual teams (Dulebohn & Hoch, 2017) and the application of the framework itself is explained in the following way:

“[It] provides a contingency approach to virtual team research, based on the assumption that in particular organizations or situations different types of virtual teams [...] may be used. As a result particular inputs, processes, and moderating factors may be more or less deterministic [...] (Dulebohn & Hoch, 2017, p. 570)

Essentially the IPO framework is to be used by researchers as a diagnostic tool, to identify and analyze relevant factors, depending on the research aim and the teams studied. In this thesis the aim is to understand the exhibited behaviour by way of team processes and emergent states, and how they are impacted by various moderators and inputs.

3.1.1 Components of IPO

Here the components and subsequent factors of Dulebohn and Hoch's (2017) version of the IPO framework are presented.

3.1.1.1 Inputs

In Dulebohn and Hoch's (2017) version of the IPO framework, three sets of input factors are presented. Firstly, the organization factors that do not originate from within the team in question, but instead involve external factors imposed by the wider organization. Examples of these are listed, including the overall design of the virtual team such as the team size, goals, and the structural support. Secondly, team leadership includes suggested factors directly tied to the leadership of virtual teams such as the creation and maintenance of relationships, by employing a certain leadership style whether it be task- or relationship-oriented (see section 3.2). Thirdly, the set of input factors labeled team composition encompasses the individual parts making up the team - the team members. Dulebohn and Hoch (2017) highlights factors such as surface and deep level diversity composed of ethnicity, gender, and age. According to Dulebohn

and Hoch (2017), these input factors are all viable in influencing the forthcoming processes going on within virtual teams, but as previously mentioned not all will be given the same focus depending on the teams studied and research aim.

3.1.1.2 Moderators

Moderators are by Dulebohn and Hoch (2017) not categorized as having a direct relationship to the team processes and emergent states like inputs and outcomes does, but instead as influencing “the direction and/or strength of the relationships in the model” (ibid., p. 572). Thus, moderators *moderate* the relationships between inputs-processes and processes-outcomes. The factors listed in the framework by Dulebohn and Hoch (2017) are task interdependence, task complexity, and team context. Task complexity serves as a moderating constraint on virtual teams, as virtual teams must adopt different ways of working depending on the complexity of the task at hand (Bell & Kozlowski, 2002). For instance, a simpler task such as a discussion between two people, or a more complex one demanding the simultaneous collaboration between a large group of people, will put different strains on a virtual team. This can in turn depend on factors such as the ICT used or the individual's communicative ability, and thus the process will be *moderated* differently. Task interdependence regards to which degree the structure and design of roles and tasks make virtual team members dependent on each other. In a virtual setting, having tasks that require high levels of dependence and thus collaboration between team members, will serve to moderate the level of cohesiveness on a team level (Hambrick et al., 2015). Team context refers to the constraints set by the external environment the virtual team operates in, such as legality issues with the use of ICT in teams that are globally dispersed (Dulebohn & Hoch, 2017).

The fourth moderator suggested by Dulebohn and Hoch (2017), and the one that the authors emphasize as the most prominent one is virtuality. Virtuality is often referred to as a multi-dimensional term and categorized in terms of degree that can vary greatly in regard to cultural, spatial, temporal, or technological competence (Gibson & Manuel, 2003; Webster & Staples, 2006). A team communicating entirely using ICT compared to a team that gets together face-to-face once a week, are thus of a higher degree of virtuality. It is a very nuanced label and should be treated as such, distinguishing the degree of virtuality in the teams studied (Webster & Staples, 2006). In the research on virtual teams, assessing which moderator most heavily

moderates the relationships between the various components, virtuality is deemed as the most prominent one (Bell & Kozlowski, 2002; Bowers et al., 2000; Dulebohn & Hoch, 2017; Hambrick et al., 2015).

3.1.1.3 Team Processes & Emergent States

With moderators serving a moderating function, team processes and emergent states are the mediators that transform inputs into outcomes. Previous research on team processes and emergent states in regard to inputs compared to outcomes are relatively scarce, as Ilgen et al. (2005, p. 519) writes about late 20th century research on teams:

“The search was for answers to the generic question of what makes some teams more effective or more viable relative to others [...] Over the past six years, more attention was paid to mediating processes that explain why certain inputs affect team effectiveness and viability.”.

Thus, it is only in more recent years that these mediators; team processes and emergent states, have become the focal point in the research on virtual teams. Emergent states can be defined as properties of teams that develop over time and are not to be reduced to behaviour on an individual level. Instead, emergent states can be seen as a result of the relationships amongst team members, such as their shared grounds for motivation, norms, attitudes, or trust (Antoni & Hertel, 2009; Kozlowski & Ilgen, 2006; Mathieu et al., 2006). Trust is by Staples (2001) differentiated as being of two dimensions: cognition-based trust that evolves from reliability, competence, and the ability to accomplish tasks in a trustworthy manner; and affect-based trust that are the affective connections between two or more individuals, with descriptive attributes being those such as genuine care, patience, and tolerance. Affective-based trust evolves from strong social relationships, whilst the cognitive is tied to performance (Cogliser et al., 2013). These dimensions evolve at different stages within a team's life cycle as they are emergent states and are proven to relate to a virtual team's performance (Staples, 2001). In a comprehensive study of team processes, Marks et al. (2001) defines team processes as members' individual actions, whereas emergent states were construed as, “constructs that characterize properties of the team that are typically dynamic in nature and vary as a function of team context, inputs, processes, and outcomes” (ibid., p. 357). Thus, emergent states can be seen as a dependent variable generated in turn by the ongoing relational processes within a

team, hence the name *emergent* states. In contrast team processes can be defined as the actual behaviour exhibited by the team members such as cohesion, engagement, and internal communication (Marks et al., 2001; Dulebohn & Hoch, 2017).

In the IPO framework the first set of processes are the cognitive, which are heavily influenced by the leadership input (Dulebohn & Hoch, 2017). The creation of *shared mental models* (SMM) is a prominent example of a cognitive emergent state, which entails the congruence of the individuals perception of factors such as tasks, responsibilities, roles, norms, and goals (Maynard & Gilson, 2013). Essentially, the cognitive team processes and the SMMs encompasses the individuals within the team and their agreement on factors such as the ones mentioned previously (Marks et al., 2001; Maynard & Gilson, 2013). Additionally, Maynard and Gilson (2013) present two variations of SMMs due to their distinctly different developmental processes: namely task and team SMMs. Task SMMs encompasses the understandings of requirements, expectations, and execution of actions, whilst team SMMs regard the normative actions regarding decision making, hierarchical structure within the team, and the team's collaborative culture (Maynard & Gilson, 2013). Furthermore, the affective processes in the IPO framework are by Marks et al. (2001) described as the mood, or the affective climate within a team. This is a highly dynamic process where the conditions under which the team operates can truly test the team cohesion and how the team members and leaders collaborate. Thus, team cohesion is of great importance in this regard, with leadership and team members alike being responsible for contributing to creating a “collective efficacy” (Marks et al., 2001, p. 466) where the team works together. Additionally, the motivational processes in the IPO framework encompass the motivation amongst team members to work and contribute to the team effectively reaching their goals, as well as creating a good group dynamic. Lastly, the IPO frameworks' behavioural processes encompass amongst other factors the use of ICT, communication performed through ICT, and shared leadership. The latter is the process of which team members take on responsibilities normally performed by the team's leader, proven by previous research to contribute to high levels of trust and satisfaction in virtual teams (Robert & You, 2018).

3.1.1.4 Outcomes

Outcomes are the results of the team processes, thus how a team responds to the inputs and moderators. Dulebohn and Hoch (2017) differentiate between two levels of outcomes, those on team and individual levels. In essence the outcomes can serve to describe how well a team is performing in terms of team productivity and efficiency, but also on the level of individual's satisfaction with their leadership, tasks, and team culture.

3.1.2 Critique of IPO and its applicability on virtual teams

For the purposes of formulating an understanding of the version of the framework used in this thesis, this section will intertwine criticism of Hackman and Morris' (1975) initial version of the IPO framework, with how Dulebohn and Hoch (2017) with said critique in mind more aptly have designed the framework for research on virtual teams.

3.1.2.1 Critique

The early version of the IPO framework has been called a “simple cause and effect perspective” (Ilgen et al., 2005, p. 519) that postulates a view of teams as stale and linear, and therefore a heuristic approach to the research on teams. Thus, scholars have repeatedly suggested for future research to bear in mind the ramifications of the increasingly complex context that teams now operate in, especially virtual teams (Bosch-Sijtsema et al., 2011; DeShon et al., 2004; McGrath et al., 2000). In a literature review of the research on teams coupled with a detailed analysis of the IPO framework, Ilgen et al. (2005) were able to identify three areas of erroneous thinking within the early version of the IPO framework: the wrongful invoking of a single-cycle linear path framework which omits feedback loops; ambiguously defined processes which often are confused with emergent states; and the relationships between the components suffering from insufficiently detailed descriptions. These findings are not entirely new, as similar statements have been made in previous works regarding the IPO framework (Kulik, 1987; McGrath, 1984; Steiner, 1972), indicating that the limitations of the framework have for long been known to both users and critics of the framework. Ledwith and Ludden (2016) points out another concern regarding IPO frameworks in general, which is that IPO frameworks do not put any certain weightings on the components and their factors, while certain aspects can have greater importance for a virtual team, such as information richness or task complexity. It is with these shortcomings of the framework in mind that we proceed to make the case for its applicability

in this thesis by referring to research that has since revised the framework with respect to its weaknesses and adapted it to be of good use in the research on modern-day virtual teams.

3.1.2.2 Response to the critique

The first point of critique by Ilgen et al. (2005) regarding the single-cycle linear path has been remedied in Dulebohn and Hoch's (2017) version which includes a feedback loop, emphasizing the framework's focus on the relationships between the different components. The feedback loop exemplifies a fact central to virtual teams, as Dulebohn and Hoch (2017, p. 572) puts it, "individuals and teams are learning entities that adapt and adjust to environmental changes and entities that are capable of modifying and developing over time". It is exactly this, the behavioural adjustments made that this thesis aims to research in greater detail. Thus, with regard to the feedback loop which "represents the effect of team outcomes influencing on-going team inputs as well as process and emergent states." (Dulebohn & Hoch, 2017, p. 572), research will benefit from scrutinizing how an outcome such as individual satisfaction, can impact team processes such as cohesion.

The third point of critique lifted by Ilgen et al. (2005) argues that the framework's descriptions of the relationships between components to be insufficient, meaning that this thesis must bear in mind and will benefit from, scrutinizing in detail the state of the relationships between the components in the framework. This is to sufficiently explain how an input like leadership can affect behavioural processes. Ilgen et al. (2005) also urges future research to consider *boundary conditions*, which refers to the circumstances under which people are more prone to for example certain emergent states. In the context of virtual teams where explicit and clear communication is deemed a necessity, the communicative ability of an individual is of great importance, but it is not the sole factor. The circumstances under which the individual operates also plays into his or her ability to communicate properly. In this case of communication, the boundary conditions could be norms regarding the use of emoticons and GIFs, or the unspoken work-life balance within the virtual team (Li & Herd, 2017; Morley et al., 2015). When nearing a demanding deadline, the team's level of acceptance for receiving a work-related message in the late evening might have risen, in comparison with the first day of the project. This example serves to nuance the relationships between for example inputs and processes, and how boundary conditions can shift over time and affect for example behavioural processes.

Dulebohn and Hoch's (2017) has taken the critique presented by Ledwith and Ludden (2016) regarding weighting in concern by describing the application of the IPO framework as a tool to identify and analyze relevant factors and not to create a guideline of relevant factors for a virtual team in a certain context. With this critique in mind, this thesis aims to analyze the impact of leadership and ICT on team processes and emergent states such as cohesion, trust, collaboration, and communication derived from earlier literature about virtual teams by utilizing the IPO framework.

3.1.2.3 Framework not chosen

The validity of the choice of framework can be strengthened by quickly and concisely dealing with other frameworks that could have but were not chosen for this thesis. The research on virtual teams is a growing research domain (Martins et al., 2004; Cheshin et al., 2011), and thus IPO is not the sole framework claiming to be aptly designed to analyze virtual teams. The Dynamic Group Interaction Model (DGIn) (Andriessen, 2003) is structured similarly to IPO, discussing processes and outcomes. Also, team effectiveness is determined because of a combination of conditional factors similar to the IPO framework. Still, IPO is preferred as the DGIn lacks a history of recent, practical applications in the research of virtual teams, compared to the IPO framework's widespread application in research on virtual teams (Dulebohn & Hoch, 2017; Hoch & Kozlowski, 2014).

3.1.3 Summary of IPO

As this thesis attempts to create a greater understanding of what and why virtual teams' behavioural processes look like, IPO is an apt choice of framework since the focal point of Dulebohn and Hoch's (2017) version is the relationships between the inputs, processes, moderators, and outcomes. By determining how these relate to the virtual setting that the teams operate in, we hope to see what behaviour it causes amongst the team, but also what exactly that cause is. Thus, this thesis' aim is to specifically study the inputs of ICT and leadership, the moderator of virtuality, and their relationship with the team processes, as these have proven to be aspects of importance in virtual teams according to previous research. Therefore, these components from the IPO framework will be of higher relevance for the aim of this thesis. The other components will still be considered due the nature of their relationship to the team

processes, but not to the same extent. Figure 3 below illustrates the selected components and factors that this thesis will focus on.

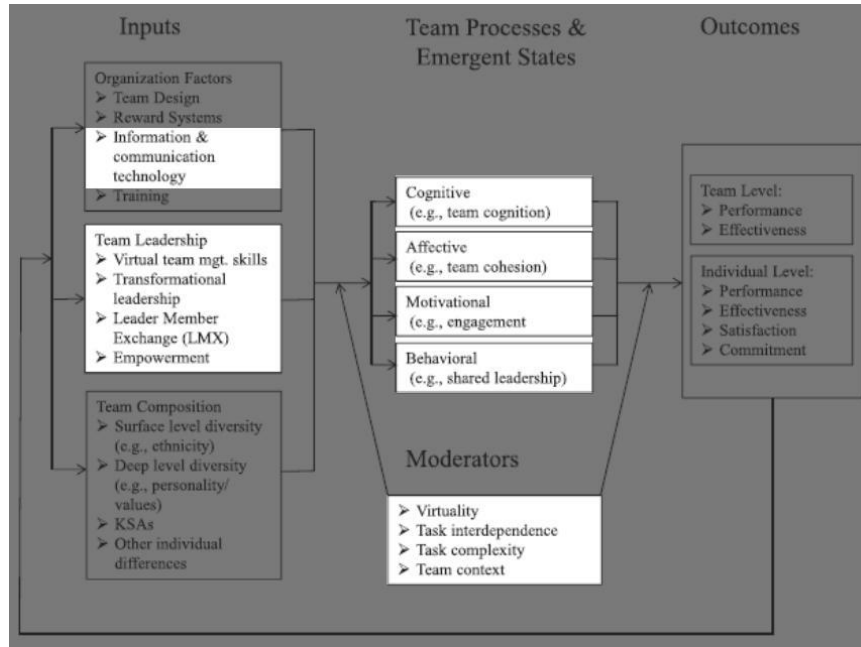


Figure 3. Factors and components of the IPO framework central to this thesis research aim (adapted from Dulebohn and Hoch, 2017).

3.2 Task- and relationship-oriented leadership behaviour

As derived from the IPO framework, leadership and its behaviour acts as a critical input that facilitates the development of team processes and emergent states which then affects various outcomes. These processes and emergent states are both related to individual members and the whole team since these are related to their actual behaviour. Especially within virtual teams where a leader's behaviour can be both directed to individuals through individual messages and the whole team with messages related to the whole team. To fully understand how the behaviour of a leader of a virtual team affects this relationship a multi-level perspective where both individuals and the team must be considered. Therefore, it is important to conclude what behaviour leaders of virtual teams can use to facilitate the most critical team processes and emergent states on both team and individual level, to enhance the overall team effectiveness (Liao, 2017). With the lower information-richness resulting from virtuality, leaders of virtual teams often face challenges in influencing their team members. To compensate, leaders of

virtual teams need to adapt their behaviour to be more suitable for the virtual context (Dulebohn & Hoch, 2017; Liao, 2017). Huang et al. (2010) propose that leaders of virtual teams need to be more active in their leadership to overcome the constraints of virtually and to influence members, which includes more frequent communication and facilitating a structure regarding technology and tasks.

Categorizing leadership behaviour into relation-oriented and task-oriented is not something new in leadership research, as it has been a common way to describe and differentiate between behaviour within traditional leadership (B. Brown, 2003; Pratoom, 2018). These behaviour types can be seen as the fundamentals of many leadership styles and therefore it is important to nuance these behaviours. Research has also used this categorization to break down and understand what leader behaviour facilitates team effectiveness (B. Brown, 2003; Burke et al., 2006; Pratoom, 2018). Dulebohn and Hoch (2017) propose that leaders of virtual teams should strive for a more inspirational or relationship focused leadership to be able to compensate for decrease in opportunities to influence their team in a virtual setting. Liao (2017) argues that task- and relationship-oriented behaviour is especially important for overcoming the challenges with virtual teams. As mentioned in the literature review section 2.3, virtual teams often struggle with clear communication, setting up proper expectations and goals, and relationship and trust building, this is where Liao's (2017) suggestions could prove useful. Task-oriented behaviour is centered around the aspects of the team as a whole and its structure, with a focus on establishing and clarifying goals for the tasks. This includes providing guidance and setting a clear direction for completing tasks. Monitoring the progress of the team is also an important part of this (Bartsch et al., 2020; Liao, 2017). Relationship-oriented behaviour on the other hand is focused on the individuals in the team and the overall collaboration between members (Bartsch et al., 2020). Included in this behaviour is establishing a supportive climate within the team by facilitating relationships and trust building (Bartsch et al., 2020; Liao, 2017). The importance here is to promote well-being and provide support to the team members (Bartsch et al., 2020).

3.2.1 Task-oriented leadership behaviour's impact on emergent states and team processes

With the nature of task-oriented behaviour, it mainly impacts team processes but as Liao (2017) argues, individuals within the team will also be impacted by team processes since the individuals constitute the team. Liao (2017) continues that task-oriented behaviour can be used to enhance the collaboration within the team by providing the right resources and necessary support for members to perform tasks. In virtual teams where communication is more difficult it is important to facilitate knowledge sharing to establish a shared common ground between members (Liao, 2017). According to Liao (2017) a common ground generally includes a shared knowledge regarding how the communication technology should be used, the tasks to be completed, how the interaction occurs in the team, and information regarding the team members such as characteristics and personalities. With an established common ground that explains relationships, tools and tasks within the team, members can respond to tasks more effectively. To establish a common ground regarding the technology, Liao (2017) proposes that leaders can utilize task-oriented behaviour to provide members with training regarding the communication technology to ensure that it is used as expected and in an effective manner. Task-oriented behaviour can also be used to provide common knowledge regarding tasks, by clarifying the tasks at hand and setting a clear direction for the team according to Liao (2017). Liao (2017) also argues that trust is a crucial part for virtual teams to be successful, and that building trust is heavily dependent on good relationships which is difficult for leaders of virtual teams to establish due to the task-oriented nature of virtual teams. Still, leaders of virtual teams can use task-oriented behaviour to establish a routine of using synchronous communication technology such as videoconferencing to enable more social communication to facilitate trust.

3.2.2 Relationship-oriented leadership behaviour impact on emergent states and team processes

The main usage of relationship-oriented behaviour is to enable a supportive and open climate within the team. This eases the processes of team members getting to know each other and establishing relationships. The more established the relationships are between the members, the more likely they are to be willing to collaborate and interact with each other (Liao, 2017). This also facilitates a general cohesion within the team (Bartsch et al., 2020). With an increased

interaction between members, it is more likely that members will share and learn by each other and thus facilitate knowledge sharing. Members will also be likely to establish a common ground regarding how interactions occur in the team and the certain characteristics and personalities of the members. Trust is also more likely to be built in a climate where relationships are established (Liao, 2017).

To conclude, both relationship- and task-oriented behaviour are fundamental for leaders to affect the processes and emergent states of both teams and individuals to facilitate team effectiveness. The difficult part for a leader is how each of these behaviours should be applied and when they are suitable.

4. Method

In this chapter, the methodology used when conducting the literature review is first described. Additionally, the method of gathering empirical data is presented, along with a presentation of the interviewed teams and how they were selected. Also presented is the thematization of the IPO framework and the operationalization of said themes, followed by showcasing a sample of questions from the interview guide. Lastly, the ethical considerations, the considerations for reliability, replication, and validity as well as the methodological limitations are described.

4.1 Methodology for the literature review

A literature review is an essential part of a thesis to critically explore the state of knowledge within the chosen topic and to gain an understanding of the domain of interest. With this overview of earlier research, potential knowledge gaps and theoretical biases can be identified to propose future directions of the chosen topic. Thus, we conducted a literature review of virtual teams to consolidate earlier research and identify prominent challenges.

The literature review started off with finding appropriate and relevant keywords defining the domain of interest to find suitable literature. We started with using common terms such as “remote” and “digital” combined with “teams” and “leadership” to search for literature, but this resulted in the finding of research more related to the workplace as a whole rather than restricted to teams. Therefore, we found the keyword “virtual” combined with “teams” and “leadership” to be more successful in finding relevant research to the team context and the leadership within. To find even more relevant studies the term “challenges” was also added to these combinations of keywords.

To find the literature we mainly used *Web of Science* to guarantee a high level of quality and relevancy. We also used *Google Scholar* to a certain extent to expand our search and find relevant literature that we might have missed. The literature found in the searches were first selected by reading the abstracts and defining their relevance. The literature deemed as relevant were then read more thoroughly and categorized by their relevance to the topic. In the references of the found literature we were able to find additional relevant research. Lastly all the relevant

studies were summarized to give a general overview and define what aspects within the research domain they had studied.

4.2 Deductive approach

This thesis has employed a deductive research approach by using the theoretical framework to develop the research questions. Research has therefore been conducted specifically to collect empirical data aimed to answer the posed research questions. The deductive approach employed also resulted in the construction of themes based on the IPO framework (see section 4.5). As such, the thesis' theoretical framework guided the way in which its analysis was to take form by extracting thematic categories from the IPO framework. The analysis was conducted by deducting the relationships between the interviewees' experiences and the causes of them, thus how the inputs and moderators affect the team processes, aiming to reach greater conclusions regarding virtual teams based on the events taking place within the studied teams (Bryman, 2012; Dulebohn & Hoch, 2017). By employing a deductive approach, this thesis has aimed to reach conclusions regarding the cause-and-effect relationships between the components within the IPO framework. Furthermore, the questions making up the interview guide were designed to correspond with and capture the aspects of the various themes (see Figure 5).

4.3 Semi-structured interviews

When collecting empirical data, interviews are an often-employed method (Saunders et al., 2019). These interviews can in turn be executed differently, either more rigidly with an interview guide that is strictly followed, or by semi-structuring the interviews (Bryman, 2012; Bryman & Bell, 2013). By choosing to employ semi-structured interviews the experts, as in the interviewees themselves, were given an unrestricted platform to discuss their experiences. Semi-structured interviews is also an adaptable method where open-ended questions can be posed to uncover qualitative, information-rich answers (Bryman & Bell, 2013). Potential follow-up questions were still prepared, to help the interview along if it were to come to a standstill. All questions were based on the research question itself, the operationalization of theoretical frameworks, as well as previous research.

4.4 Selection of interviewees

The interviewees were selected through purposive sampling with the selection based on the interviewees chance of providing in-depth and detailed information relevant to the thesis' research aim (Bryman & Bell, 2015). To achieve purposive sampling, we used a set of criteria for selecting the interviewees. These criteria were mainly based on the selected scope of our thesis. Based on these criteria we contacted several organizations and we found three different organizations that wanted to participate and due to time constraints, we settled with these three organizations. We then selected project teams from each of the three organizations to participate in the interviews to grant a more representative result and avoid potential biases that could occur by only interviewing multiple teams that work at the same organization. The criteria set were:

- The first criterion concerned our aim to only interview persons that work as part of a project team, to guarantee that our interviewees either had a role as a project leader or a project member. This would aid us in narrowing our focus to the interactions and relationships within a project team instead of the workplace.
- The second criterion pertained to the project team having been collocated prior to the COVID-19 pandemic, and since having shifted to a virtual team-model.

The selected organizations were contacted through email where we expressed our interest in interviewing project teams that had earlier been collocated. We contacted the selected organizations and told them that we wanted to interview one team consisting of one leader and associated members, as well as what insights we hoped to gain with our thesis. After initial contact we discussed further details with the contact person regarding what topics the interview would cover and how the interviews would be conducted. When the respective teams agreed to participate, we enquired about the date and time that the interviewees had the opportunity to participate.

Within the IPO framework there are certain factors considered the inputs of a virtual team that could have an influence on the virtual teams' behaviour. Essentially, these factors are descriptive information regarding the pre-existing factors affecting a virtual team such as organizational factors, leadership, team composition and virtuality. Therefore, a summarization

of these factors for each selected virtual team and their organization will be described below, to generate an understanding of the foundational conditions for these teams.

4.4.1 Trafikverket

Trafikverket is responsible for the overall long-term infrastructure planning of road, rail, sea, and air transport in Sweden. This also includes the construction, operation and maintenance of state roads and railways. Trafikverket describes themselves as developers of society that plan for a holistic integration of the entire transport system.¹

Team 1 works at Trafikverket where they are involved in a project building a large bypass in Stockholm. The project team consists of around 15 members and the project started in 2016 and is ongoing, with a shift to working virtually taking place in 2020. Team 1 mainly utilizes a video-conferencing tool with chat functions as the ICT for interactions and communication. The project leader in Team 1 has had no previous experience of leading a virtual team. The adopted leadership and behaviour will be analyzed based on the empirical findings. The entire Team 1 is placed in Sweden where they live and work, and the project members' gender, age, and personalities were not analyzed further in this study since this was deemed as being outside of the scope for the thesis' research area, and this applied to Team 2 and 3 as well. This is something that has been taken in consideration in the analysis and will be discussed in chapter 8. Since Team 1 is considered a large team that requires collaboration between many individuals within and outside of the project team in combination with a long timeframe for the project, the task complexity and interdependence are considered to be high. Team 1 is of a relatively high degree of virtuality, although not as high as Team 2 and 3, as it works completely virtually except when some project members are at the office for business-critical meetings.

4.4.2 Releye

Releye is a leading IT and business consulting company that are experts in customer relationship management (CRM) and business strategy. Releye works mainly with the

¹ <https://www.trafikverket.se/en/startpage/>

platforms Microsoft, Salesforce, and Sweet Systems, where their goal is to make their customers' workday easier, increase profitability, and make their customers happier.²

Team 2 works at Releye in a project where they have implemented and are maintaining a CRM system for a customer. The project team was created in late 2019 and they shifted to working virtually in the late spring of 2020. Team 2 consists of three full time project members and several other members that contribute to the project when needed. Team 2 uses a communication platform that provides collaboration, video conferencing, and chat functions. The project leader in Team 2 has had no previous experience of leading a virtual team. Team 2 is considered a small team that has a lot of close working relationships with external contacts, thus a collaboration between many individuals within and outside of the project team is still needed. The task complexity of Team 2 is considered not to be as high as for Team 1 due to the size of the project. The interdependence is still considered to be high for Team 2. Team 2 works completely virtually and is deemed to have a level of high virtuality.

4.4.3 Lumera

Lumera is a leading insurance-technology company driving safe, continuous digital transformation in the Life and Pensions industry. In short Lumera is assisting the biggest Life and Pensions companies across Europe digitally transform with a combination of lifelong partnership, leading cloud-native technology, and deep domain expertise.³

Team 3 works in a project at Lumera where they develop and integrate an IT platform for a customer, as well as providing expert consulting. The project started in 2018 and the shift to working virtually occurred in 2020. Team 3 consists of about 15 members including members whose organizational belonging is to the customer. Team 3 uses a communication platform that provides collaboration, video conferencing, and chat functions. The project leader in Team 3 has had no previous experience of leading a virtual team. Team 3 is quite a large project team that requires collaboration between many individuals and has been active for a long time. Thus

² <https://releye.se/en>

³ <https://www.lumera.com/en/>

the team's task complexity and interdependence is considered high. Team 3 has a high level of virtuality as they work completely virtually.

Interviewee	Role	Team	Industry	Date	Length (min)
PL1	Project leader	Team 1	Construction	24/3	30
PM1	Project member	Team 1	Construction	26/3	30
PM2	Project member	Team 1	Construction	26/3	35
PM3	Project member	Team 2	IT	13/4	25
PL2	Project leader	Team 2	IT	14/4	30
PM4	Project member	Team 2	IT	16/4	33
PL3	Project leader	Team 3	IT	3/5	24
PM5	Project member	Team 3	IT	3/5	25
PM6	Project member	Team 3	IT	5/5	23

Figure 4. Interviewees.

4.5 Interview guide

The most important components of the IPO framework for this thesis were the inputs of leadership and ICT, as well as the team processes and emergent states, all affected by the key moderator virtuality (Dulebohn & Hoch, 2017). These key areas were thematized (see Figure 5), and from these thematic categories questions for the interview guide were constructed.

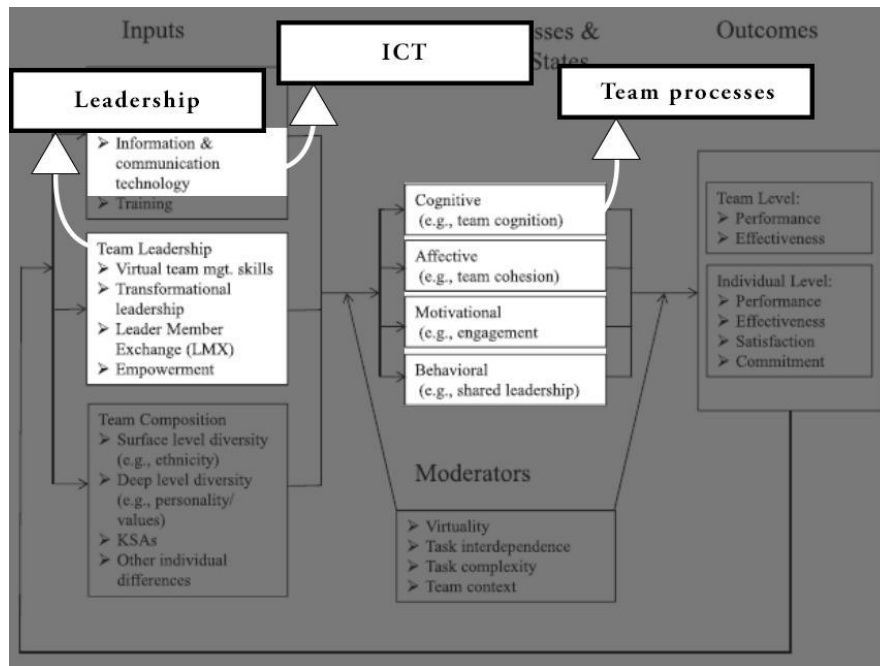


Figure 5. Thematization of the IPO framework (modified from Dulebohn & Hoch, 2017).

4.5.1 Operationalization of themes

An interview guide was developed to be used as a guiding template when conducting the semi-structured interviews. The way in which the interview guide is constructed is a very important matter, as previous research has shown poorly designed interview guides running the risk of generating skewed answers from interviewees (Bryman, 2012). To avoid these risks, Bryman and Bell (2011) suggests avoiding polar questions, that is those that generate one or two answers, typically being a “yes” or “no”. In addition, we chose to begin each interview by placing the thesis into a wider context and following up on the previously signed consent form (see Appendix A). This introductory part also included a brief definition of virtual teams to create a mutual understanding of what would be meant when referring to virtual teams in the questions posed in the interview. Starting interviews off in this way; slowly easing the subject into the formalities that encompasses interviews, and defining central terms, has been shown to increase the generation of thoughtful and insightful answers and make the subject more comfortable (Bryman, 2012).

The themes constructed from the IPO framework (see Figure 5) were in turn operationalized into an interview guide (see Figure 6).

Theme	Sample question	Description of theme
Leadership	To what extent do you have insight into how your team members fare socially? Posed to: Leaders	Encompasses various leadership processes such as: the way in which leaders initiate dialogue about non-work-related topics; insight into the team's work; trust from leader to members; the leaders' self-perception; and the members perception of the leadership.
Team processes	How are the social relationships within your team stimulated? Posed to: Leaders and member	Illustrates the team's social relationships: how human behaviour is affected and what is experienced by way of social stimulation and interaction; cohesion and motivation displayed by leaders and members.
ICT	Do you experience that the ICT you use adds value to your work? Posed to: Leaders and members	Tying into the above themes, but with the scope set on the limitations and opportunities that the use of ICT creates for the teams.

Figure 6. Operationalization of themes into the interview guide's questions.

4.6 Execution and transcription of interviews

In an ideal situation face-to-face interviews would have been conducted to guarantee the best results from the interviews, but at the time of this research project being conducted regulations and circumstances imposed by the ongoing COVID-19 pandemic made it the wisest and safest choice to conduct the interviews digitally by video conferencing. We chose video conferencing instead of regular phone calls with the expectations of a more fluid and natural interview due to the richer communication it allows. The interviews were performed in Swedish as it was the native language of all interviewees, and although they all possessed an able proficiency in English it was deemed wiser to conduct the interviews in Swedish as to make the interviewees more comfortable and able to open up about their experiences.

All interviews were audio recorded, as to facilitate the work of transcribing the interviews afterwards. By recording the interviews in their entirety, we reduced the probability of losing out on valuable information due to insufficient notetaking during the interviews or the shortcomings of memorizing the interviewees' responses (Bryman & Bell, 2011). Although audio recordings generate a much larger dataset than if we had employed another method, it also provides certain advantages: firstly, the ability to relisten to specific parts of the interview that appears interesting; secondly, the opportunity to decode certain formulations or answers emphasized in certain ways by the interviewees that might have been missed if we had simply written down their responses in real-time (ibid.).

The audio recorded interviews were then transcribed in the original language (Swedish) and based on the transcribed material we did systematic coding to find relevant and valuable quotes to the thesis research aim. The chosen quotes from the interviewees were translated into English to ease the readability of the thesis by matching the written thesis language (see Appendix B). With the themes used in the operationalization of the interview guide derived from the IPO framework (see Figure 5), the systematic coding could be used to place interesting quotes within the broad themes and derive codes relevant to the themes. These codes represent the sub themes within the main themes found in the empirical findings and discussed in the analysis. Thus, providing a better connection between the empirical findings and the theory.

4.7 Ethical considerations

The conducted research work for this thesis has followed a code of ethics where the aim has been to ensure and uphold the participants anonymity and informed consent. As described by Bryman (2012), this can be accomplished in several ways. The researchers chose to start off each individual interview with a briefing of the research aim as in to lay out what we were setting out to accomplish, and the research questions we were aiming to answer. Furthermore, a repetition of the interviewees' rights in terms of anonymity and consent to the interview being audio recorded were done to ensure that the consent given was an informed one (Bryman, 2012). A preliminary action was also taken before each interview, as a consent form (see Appendix A) was sent out to each interview which was signed by both the interviewee and the thesis authors to guarantee their consent. In that document the interviewees rights were outlined

in detail, as well as the approximate time of the interview, and that the interviewee had the right to abort the interview at any given time. In this form we also highlighted that they could contact us to get more details regarding the thesis or how their interviews were applied in the thesis.

4.8 Reliability, replication, and validity

In the evaluation of the inherent quality and trustworthiness of research three criteria can be used as determinants: reliability, replication, and validity (Bryman, 2012). Reliability is a factor more often pertaining to quantitative research where one wants to achieve a consistency in the execution of the research (ibid.), such as by making use of instruments that measure, calculate, or analyze data in a consistent manner regardless of test subjects, or when or where the research is carried out. For this thesis, the same interview guide has been used for each interview and thus the same questions have been asked, indicating reliability. Replication shares similar attributes with reliability as it also deals with the feasibility of replicating a previously conducted research once more. Thus, it intertwines with reliability in that the research should be designed in such a manner that it is possible to conduct again in a future iteration (ibid.). If the method of the research project is not laid out in a sufficiently detailed and explicit manner, it becomes increasingly hard for future researchers to replicate and thus verify the research results with another set of subjects, or in another setting. This thesis enables future researchers to replicate this study by providing the thesis' interview guide, a thorough description of the methodology used, and the types of project teams studied. Validity is described by Bryman (2012, p. 47) as the most decisive criterion of a research project's quality as it encompasses, "[...] the integrity of the conclusions that are generated from a piece of research.". Measures recommended by research (Bryman & Bell, 2013) to strengthen a thesis' level of validity that have been taken include: providing the quotes showcased in the empirical findings in their original language; placing great importance on following the ethical considerations described in section 4.7; letting the interviewees take part of the results of the study; as well as the aforementioned detailed descriptions of the research approach, methodology, and theoretical background.

4.9 Limitations

The methodology applied in this thesis has its limitations that needs to be considered both for guaranteeing replicability and reliability. As mentioned, the selected quotes from the transcribed material that was used in the empirical findings were translated from Swedish to English. This could imply certain misspellings or misguided interpretations since these translations are based on our subjectively understanding of the original quotes. We have considered this factor by including both our perspectives through discussing and agreeing on the translations. We also have included the quotes in their original language in Appendix B.

As we have interviewed a sample of nine people, spread across three teams and three organizations, respectively. Our findings cannot be taken as a representative sample of the state of virtual team leadership, nor can it be used to generalize the way in which virtual team members are affected by the virtual setting.

Lastly, the certain aspects of the interviewed team's characteristics and context such as team composition, task complexity and task interdependence were based on assumptions found in the empirical data. These aspects were not deemed relevant for the thesis and were therefore not studied further to narrow the scope of the thesis.

5. Empirical findings

In the following chapter the empirical findings will be presented in accordance with the themes previously presented in section 4.5 (see also Figure 6).

5.1 Team processes

In this chapter the empirical findings related to the cognitive, affective, motivational, and behavioural team processes of the IPO framework will be presented as to showcase what changes have taken place, and how they have been experienced by team leaders and members alike.

5.1.1 Getting acquainted with new colleagues

During the interviews one topic where frequently mentioned, which was regarding the experience of getting acquainted with new colleagues. According to the interviewees, efforts to get acquainted with new project members are hindered when working virtually:

[...] we've only interacted through Teams and it was a bit of a challenge in the beginning, especially because we didn't know each other and it's more difficult to connect [...] with new people and in big meetings. - PL2, Team

2

To get to know someone at a distance is difficult, especially for those that are new to the team. - PM2, Team 1

[...] you notice that people are more prone to disappear into the crowd when working virtually compared to a physical meeting. That must be actively dealt with, to try and include and involve people in another way. - PM3,

Team 2

The interviewees express concerns regarding big virtual meetings with many participants, that reduces participation to a selected few, with newcomers deemed to be at risk of not being 'seen'. In consequence, additional efforts must be made to integrate new member into the teams:

[...] it might be a bit difficult I think, for people who are new might not want to interrupt the boss with a question. Because you don't bump into each other as you do in a physical workplace, it might be a bit more difficult if you are less senior to take the opportunity to ask. - PM4, Team 2

[...] There I think it was quite difficult for them to have their colleagues through the web [...] During the days I was at the office I noticed that they asked a lot more questions [...] which might not be so weird since they are new and don't know people [...] - PM5, Team 3

It appears as if new members might not have the same opportunities to familiarize themselves with their colleagues as they would have in a face-to-face setting. This sentiment is shared by PL2, Team 2, who describes the difficulties of putting a face to a name:

The challenges are especially tangible when it's newcomers [...] you don't really get an idea of what they're like [...] there are those who I've never seen because they never turn on their webcam [...] you make up what they look like, and then when you're completely wrong you're like, God, is that you? [...] - PL2, Team 2

It appears as if getting acquainted with new colleagues can be especially hard in the virtual setting, even when using video conferencing tools.

5.1.2 The maintenance of trust

Trust is a vital component for virtual teams and many interviewees agree with this statement where the interviewees express that they have trust in their colleagues to do their tasks. Many interviewees had perceived there to be no change in their level of trust in their colleagues when working virtually, compared to working face-to-face:

You must place trust in the people you work with, that they will finish their tasks. - PL1, Team 1

[...] it's results that matter. [...] If we must deliver something on Friday, that's what's important. [...] I don't always must know what everyone's doing. - PM2, Team 1

You trust each other. And no one takes offense if you ask questions. That's how I feel. - PM1, Team 1

In relation to describing a maintained high level of trust, interviewees also brought up the fact that they had worked together face-to-face with their team prior to the pandemic forcing them to work virtually:

[...] from my own point of view, there's no difference. I've been with so many of them for so long [...] I can almost picture how they're sitting and working from home. - PM4, Team 2

The level of trust appears unchanged for many, but certain apprehensions are raised by a leader regarding the level of insight available to them:

You don't really know what's going on, so you must rely on these reports that you get every day and have a list of questions that you ask in the Skype meetings. - PL1, Team 1

In contrast, Team 1's project members maintain that the level of coordination and transparency has remained the same and is sufficient for them to get their work done:

It's the same [as when working face-to-face]. - PM1, Team 1

On the other hand, some express the need of communication to gain a better insight to increase the transparency and guarantee better cooperation:

It is probably easy to get in a situation when you work in your own space and once you're done, you tell them that you are done. But then if someone else has done something that maybe affects what you have done and that's a trap you don't want to fall into. So I try to prevent others from working in their own space and not communicating properly with each other. - PM3, Team 2

The level of trust appears high through all the teams, but not without its challenges. The caveat appears to be the experience of working together face-to-face. This is compared to the difficulties of onboarding, highlighted in the previous section:

[...] difficult when you get new colleagues who start during the pandemic. Getting to know someone at a distance is a bit difficult, especially for those who are starting out as new employees and colleagues. It's not easy to call and ask someone if you need help connecting to a system, it's not easy to call someone you don't know. It's easier if you are sitting in the office, in the same room. So it can be a little difficult to handle new employees, to ensure that they feel welcome, that they feel good at work. - PM2, Team 1

PL2, Team 2 postulates another view, that getting to know her team members through ICT has been a successful operation:

For example [name redacted], I think I met him maybe once in real life. [...] I got to know him through Teams. He works with another customer three days a week, but two days a week he works with this customer that we work on together, and we don't talk all the time, but we chat a lot. It's been easy to get to know him virtually, so it's pretty cool that I feel like I know him. - PL2, Team 2

To conclude, there are difficulties faced by leaders in maintaining a good overview of their team members' work, as well as maintaining and developing social relationships, with onboarding seemingly affected by this.

5.1.3 Lack of participation and an increased independence

With a shift to working virtually, strictly work-related tasks are not the only activities that have had to adjust. Seemingly, the willingness to participate in what is now virtual social gatherings, is a point of concern even for those who express a gratitude for their existence:

It's been brought up during the morning meetings that there are very few of us who participate. We must get better at that, so that at least those of us who work from home and don't have a cafeteria to go to, connect. -

PM1, Team 1

I must admit that I'm very bad at participating in the fika-hangouts via Skype, but it has worked well for others.

But I'm really bad, if I see that it's 14:10 [the hangout already started], I'll just connect tomorrow instead. -

PM2, Team 1

This tendency to not find the time or the motivation to join in on the social hangouts showcased here by PM1 and PM2, Team 1, are motivated by the sheer fact that when working virtually, they have the option of opting out without having to deliver the "no" to anyone:

If you're in the office it's not easy, if your colleagues go, do you want to get coffee? Then it's a bit harder to say no. But now I can choose whether to connect or not, and so it is pretty easy to just keep doing what you're doing.

- PM2, Team 1

While others do not believe that virtual social gathering brings any value:

We've made attempts to hang out and have "after-work's", I participated once, but I think it's useless. Some people seem to like it, but I think it's like, you can't create that one-on-one contact that you get at face-to-face

workshops or after-work's, because there you might end up on the couch next to someone you don't know. [...]
I'd rather go down and talk to the neighbour. - PM6, Team 3

The experience of working virtually has been perceived quite differently by the interviewees. Some have experienced a feeling of independence, with less distractions, and less social interactions leading to perceived higher productivity and a more positive attitude towards working virtually:

I'm probably more productive. Absolutely. I sit at home to work. I probably get more done than I should. - PL2,
Team 2

I'm more productive because there's less idle time [...] it feels like you get more hours out of a day but still don't work more. Maybe I even get 30 or 45 minutes of more work done, but still have more free time. - PM6, Team 3

You are not at all as efficient when you are at the office. You're constantly disturbed by people who come and go to talk or phones that ring or printers that don't work and so on. But those distractions don't exist at home. [...] -
PL1, Team 1

So it feels like you're a bit more efficient at home, I must say. No one comes and disturbs unnecessarily; you call when you need to. - PM2, Team 1

Others feel different regarding their productivity:

I would probably say that it hasn't changed significantly [...] It's the same things that should be done, so to speak, even if it's under different circumstances [...] No, I cannot say that my productivity has changed in any significant way. - PM3, Team 2

I think that there really hasn't been such a big difference in terms of results [...] the end result has been about the same and just as good, I think in any case. - PM4, Team 2

[...] I would say that I work as good as I would in the office. Some things are easier in the office. The big benefit is the reduced travel time [...] - PM5, Team 3

It appears as if working virtually has not decreased productivity. Still, this fact is not entirely positive, since the distractions that includes in working at an office provides natural breaks throughout the workday:

[...] I think that for my part, I probably work more because I have a difficult time taking breaks. I often eat in front of my computer [...] There are more natural breaks when working and people come by and ask something, you take a break. I think for better or worse you gain a lot of time [...] - PL2, Team 2

[...] you take fewer breaks, you go on until lunch, from seven in the morning to 11 then you take lunch and keep going afterward. [...] There are advantages and downsides with it. You become more focused to complete your assignments and then take a break, instead of taking a break that hinders the assignment just to socialize with others. [...] - PM1, Team 1

It has become a larger focus on working hours, I work at home, take some breaks, it becomes hard to do at home, you forget to take breaks. [...] At work you know that at nine and two o'clock there is a coffee break and then the microbreaks that occur when a colleague asks something. But at home you need to find your own routine and discipline and tell yourself when to quit. [...] Once you find a good routine and discipline it works well. - PM2, Team 1

This behaviour could result in a poorer work-life balance, seemingly the case for some of the interviewees:

[...] one negative aspect that I have experienced is that you are never free from work if you don't actively decide that you are not going to do more. I have realised that because of that I work a lot in the evening since it is quiet and there is no one that contacts me. I tend to work then so I have definitely worked more during the pandemic, while it at the same time has been easier to do so. It's a special situation. Maybe a bit harder to hold back? - PM4, Team 2

I think that the lines [of work versus personal life] have blurred a bit, some log in for a quick check-in before breakfast, or some sit alone in the evening. So, I think the workday has almost dissolved a bit, and that's both good and bad, that you can get answers to things very late in the evening. There's no expectation that you will work normal working hours, because the computer is always there, and you live with it. - PL3, Team 3

Having work not confined to an office is reiterated by multiple interviews as a challenge:

[...] When you are at the office working, you don't bring your work computer when you are going home, which means that I can't work from home [...] - PM4, Team 2

[...] work is always close by when the computer is in a room a stair above, so it is easy to slip back into work for a while after dinner instead of relaxing in the couch. - PM5, Team 3

The routines and habits of one team member could have an effect on the rest of the team:

I've been pretty bad at defining when I was done, and so were my colleagues. I noticed there were people writing to each other in the evening, because someone's working and then sends a message hoping you'll answer, and I can see that and feel like yeah, I probably want to answer because I understand that that person needs help. [...] for the past half year I've really tried to make an effort to not work in the evenings as much, so now I'm feeling better. - PM4, Team 2

To conclude, the work-life balance that has come with working virtually is not perceived entirely as something negative, instead it has been considered rather positive with regard to an increase in productivity.

5.1.4 An increased freedom of choice

As presented in the earlier chapter, a feeling of independence was a perception of working virtually that quickly emerged in many of the interviews. This has surprisingly been perceived as mostly positive since this allows the interviewees for a greater focus on the tasks at hand:

[...] no one disturbs me, and I can delve into my work and work with a great focus, and I won't come out of it until my next task and then I just jump into that one. - PM4, Team 2

[...] lots of distractions that occur when you're in the office. You get dragged into discussions that you shouldn't normally take part of. It's also easier to plan your day when you're working from home, with less distractions to take heed of. - PM1, Team 1

Many of the interviewee's regard working virtually as shedding off many energy-draining and time-consuming discussions and interactions that do not add value to their work:

You miss the social connections, but it's nothing that impacts how and what business decisions are being made. - PM1, Team 1

Working virtually is described to have generated new-found ways in which employees can toggle their visibility on and off, and choose whether to interact at all with colleagues:

[...] sure, people can call or message me, but we ourselves can choose to deal with that by setting [our status] to "Don't disturb" - PL2, Team 2

PM5, Team 3 on the other hand states that the distractions are not only negative, but they can also be the chance to help out colleagues and collaborate:

[...] When you are in the office, you can hear what others around you are talking about. [...] then you can interject and tell them, that is something I know about, it is about this and this. - PM5, Team 3

Whilst many of the interviewees see working virtually as giving them more control over their own time and how they choose to dispose of it, many are also aware of the effect it has on the social connections within their team:

[...] at the office we brought lunch from home and ate together. We also had fika together. On those occasions we didn't talk about work, but about life, our partners, kids, or something else. But on Skype when you've booked a meeting for one hour, you stick to work-related topics. - PM2, Team 1

[...] at the office, in the corridors, when having a fika, you talk to each other a lot more. Now you lose those interactions and it's up to each and everyone [...] to talk to each other and create those daily interactions. - PL1, Team 1

To compensate for the increased feeling of independence, the interviewees describe the efforts made to replicate physical social gatherings. These daily or weekly informal hangouts or designated time slots for fika are ascribed various importance amongst the interviewees:

Sometimes no one participates at all, it's completely empty. But occasionally it's really fun at these meetings, although it's still difficult to replicate that feeling of [hanging out at the] cafeteria via a computer screen. - PL1, Team 1

It's not my strongest side, this 'cute stuff'. [...] organized quizzes, fun activities or fika, we've not had much of those at all. I think that it can become artificial. - PL3, Team 3

Thus, some interviewees lack interest in dedicated social gatherings, and some teams do not put much effort into organizing these at all which could be related to the reduction of participation presented in the earlier chapter. This is by some perceived to be compensated for by integrating informal talk into other meetings, and to some interviewees it is deemed as

good enough, even if they still miss the social interactions, they were part of when working in face-to-face teams:

I miss the human interactions a lot. I think many do. But to be frank, for my own part the job in itself is more easily performed. - PM4, Team 2

[...] I think that we lost a lot of this casual talk, it is definitely less of it, but it has grown over time which has led to us sometimes connecting to meetings earlier, to talk about something besides the meeting itself. - PM4, Team

2

For those who wish to maintain their social bonds with colleagues, the threshold for what it takes to initiate a social interaction is perceived to have increased:

If you want to have lunch with somebody, a completely different set of demands are placed on you to actively seek them out. - PM3, Team 2

It's easier and more natural to do so [socialize] at an office, when you have a face in front of you. That goes for a lot of things. - PM1, Team 1

The overall interaction is less frequent between colleagues and not as spontaneous due to the lack of physical meetings that occur naturally in the office. This change has been observed and is missed by many interviewees:

[...] unfortunately in one way you lose some of the daily interactions. Such as talking at the coffee machine or talking when you [...] going for lunch and so on, which sets new demands to actively search for others. - PM3, Team 2

[...] there's the spontaneity with seeing how things go. It's sad not to see. I can't see [name redacted] sitting there and spontaneously see how it goes, I actually must find a time in my calendar and see, yes, we're both available at 15:30. I only need 5 minutes, so then it may feel unnecessary that I must book a time instead of just asking a question, like you could before. [...] - PM6, Team 3

[...] Traditionally, on a workday without the pandemic you meet each other in the breakroom, in the corridors, you talk much much more with each other. You lose contact but it's up for each to participate in meetings and opportunities to talk with each other [...]. To get that everyday contact. - PL1, Team 1

In summary, the increased freedom of choice of whether to participate in social gatherings is deemed by many interviewees as a point of concern while the increased control of their time is rather seen as something positive. The lack of rich and meaningful social bonding with colleagues are missed by most, yet they also confess to knowingly and willingly abstaining from them to be able to focus on the work instead.

5.2 Implications of ICT

This chapter will present the empirical findings that reflect the implications of ICT as an input and the changes brought on by the increased dependence on ICT.

5.2.1 Habits and routines

The interviewees vary in their technological competence and experience, but the overall sentiment remained the same; that ICT delivered on its promises, and could be relied upon to a greater degree:

In our projects we use [a tool] where you can keep track of how the development is going and which development points have been implemented [...] It will be an even more important tool now [...] that it's updated so that you know where you stand so that you can communicate with the customer. - PM3, Team 2

As showcased by the above quote from PM3, Team 2, ICT has been key in keeping track of projects. But the adoption of ICT has not only brought benefits in terms of task management, it has also caused behavioural change amongst both team members and leaders:

[...] the only habit that I think I have developed is just to try to more frequently contact people who are involved in my projects, but also those who report to me. So that they feel that I'm actually there for them [...] I have previously had managers who have not been so present either physically or digitally and that's nothing to recommend. You sort of find a routine to, well, be 'there' for the employees. - PM3, Team 2

I've had to get a bit better at doing tasks that might've been handled by someone else, for example booking meetings. - PM4, Team 2

The general perception of working virtually is a positive one. Still, certain doubts linger amongst the interviewees regarding new routines:

[...] it gets a bit difficult at home, you forget to take breaks. At the office you know, at 9 and at 14 it's time for coffee. And then those microbreaks when a colleague comes and asks you, but at home you must find your own routine and discipline. - PM2, Team 1

In contrast, this has been experienced positively by some:

We're already used to them [digital tools], so there's not been that much change, it's more the human encounters that have become digital. - PM3, Team 2

[...] lots of distractions that occur when you're in the office. You get dragged into discussions that you shouldn't take part of. It's also easier to plan your day when you're working from home, with less distractions to take heed of. - PM1, Team 1

Many teams have seen initiatives undertaken to create opportunities for routine interactions by daily or weekly meetings:

Normally we work with the project on Thursdays and Fridays. Every Thursday we start with a *Daily*, which we call them, where we have a briefing that can take up from half an hour to one hour and 30 minutes, where we discuss what needs to be done and if we have any plans to execute this or we have issues that need to be solved
[...] - PM4, Team 2

[...] we have Skype meetings every morning that lasts from 15 minutes to a half hour, [...] where we discuss what happens during the day, important meetings, reports that need to be done or problems that must be handled. - PL1, Team 1

From the beginning we met much more informally and then it was enough with a weekly meeting [...] Then we started with daily meetings instead. - PL3, Team 3

These check-ins and various meetings are deemed important to many interviewees:

[...] now you have weekly meetings and you go through what happened since last time [...] But it becomes increasingly important when you don't see each other and can't talk to each other. Then follow-up becomes somewhat more important. - PM6, Team 3

We have different types of meetings, like today we had project meetings. [...] It is here we prioritize what we are doing in the next sprint and basically what needs to be done in the project, how we are managing our budget and so on. - PL2, Team 2

Beyond that we have a project meeting once a month, also digital. The whole group. Where we describe how the project is moving forward both in regard to time, technical and economical. So that everyone understands the status of the project. - PL1, Team 1

The interviewees express that this has been a great replacement for the spontaneous interactions that occur in the regular office and that these meetings create insights into what is going on within their team and project:

[...] so many opportunities have been created now for talking with each other and the dialogue has become more open in the morning meetings that we have in 15 minutes to see how everyone is doing. I think it has turned out very well, because everyone wants to share what they are doing and if something is wrong which contributes to the progress, I would say that it is the best meeting we have. - PL1, Team 1

[...] we have been pretty good at doing our Dailys in the mornings so that everyone knows what I'm doing, if there are any issues, any questions and what needs to be done today [...] - PM4, Team 2

It appears as an increase in meetings and check-in's have become a normalized and accepted routine, and a good way of increasing the interaction and communication between colleagues.

5.2.2 Communicative changes

With ICT becoming the mediator for interaction and communication, communication itself has been the subject of change in some aspects. One aspect is the need to be clearer when communicating to avoid potential misunderstandings due to the less information-rich means of communication:

You also learn that you must be even more clear and have a very clear agenda. You must prepare your material very well. You can't improvise as much, you need a solid foundation for all that you do. - PL2, Team 2

[...] I have tried to be extra clear so that there will not be any misunderstandings. [...] - PM4, Team 2

Another noticed aspect of communication through ICT is a more formal tone compared to before:

[...] It is not as natural as sitting down and drinking a coffee and listening and then adding a comment when you have a thought, so it becomes much more formal I would say. - PL1, Team 1

[...] We have a report system, where we send messages to each other about things that have occurred and so on. Here the messages are very formal and the answers too. Since we are not talking with each other as we used to, it has led to some misunderstanding, which is dependent on how they phrase their messages [...] - PL1, Team 1

A popular tool for facilitating interaction and communication is video-conferencing since it is the closest replacement for physical meetings, even though it appears that these tools still have certain limitations:

I think it's difficult, especially when we've had workshops, to get feedback from people, because it's easy when you're sitting at the same table. [...] you can look at people and read them, how they feel, to know if I must answer, but otherwise it's like this: it's completely silent, where are you, are you still there? Hello? - PL2, Team

2

[...] It is more difficult to get everyone to speak when we have certain meetings. There is another dynamic when people are sitting behind a screen of course, so you must try to ask questions directly to people that do not naturally take the same space as in a physical meeting. So you must work with trying to include people in another way. - PM3, Team 2

It has worked great until there are too many participants then it becomes difficult. It is easy for people to talk over each other [...] not as naturally as when you are in the same room together. [...] - PM5, Team 3

Another difficulty of video conferencing is the lack of incentive for participants to turn on their cameras during meetings. When there are less cameras active it seems like the whole dynamic of the meetings change:

[...] It is something about not being able to see people when you are video chatting, especially people you don't know so well [...] Those at my organization I know pretty well and can recognize by their voice, when they say something, what they mean and what they feel. But when you can't see people you don't know it can become tricky [...] - PM4, Team 2

[...] sometimes when you have Skype meetings but no one turns on the camera and you can't see each other, you lose that body language. Sometimes when I try to joke when we have a meeting where no one has a camera, I must sometimes explain that I'm only joking. - PM2, Team 1

[...] it becomes more dynamic when you turn on the camera, it becomes a different meeting when you can look them in their eyes. - PL1, Team 1

With less spontaneous interactions communication seems to have become formalized, requiring a higher level of effort from the initiator, as stated by several interviewees:

[...] I actually believe that the threshold is maybe a little higher when sending an email or calling on Skype instead of going to someone's office and asking a question. I actually believe the threshold is a little higher. - PL1, Team 1

[...] a bigger step to contact someone to get help or to get input, that it's a slightly bigger step to get in touch with someone instead of sitting next to each other in the office where it's much easier to just say, can you look at this? It's a higher threshold when you're dispersed. - PM3, Team 2

[...] in some way there is a slightly larger step to ask for help when you are calling them on Teams compared to when they are sitting close by and you can see if they are busy or not. Then you can ask them directly, now you hope that they will answer and have time to help you. - PM5, Team 3

Still, there are those that believe that working virtually has instead made communication more effective and approachable:

Thanks to Skype it is nearly unchanged, you can even initiate more contact than when you had 30 meters to another's office. Now you only turn on Skype. [...] - PM1, Team 1

Everybody is so used to Teams that it is easier to take a quick meeting. It's not that we must connect to a video conference like back in the days, which felt like a project in itself. [...] it's much more effortless. - PL2, Team 2

You can do these ad-hoc things face-to-face [by video] even if you're not collated. It has actually become easier to keep in touch with more people at the same time. You used to run around the offices, be at meetings, out with the client. You almost had a worse track of things. The interaction with the project group has become more frequent. [...] It's easier to set up meetings now than in the past. Previously, many were away whole days with the client and the rest of us were here, and then you didn't see each other. - PL3, Team 3

Since the communication is not as spontaneous as before, the interviewees seem to mainly engage in conversations for the purpose of work, and not for the sake of socializing:

[...] The one that receives the call wonders what the purpose is and not if one wants to talk for a while. You always have a purpose for calling someone [...] - PL1, Team 1

No one calls to ask if you caught the game last night, like you would've at the office. You know they have a purpose for contacting you. [...] - PL3, Team 3

A question that takes 15 seconds used to take five minute instead so you have some time over now, but now when one asks a question over Skype, you keep working instead, no further discussion. It is often quiet. - PM1, Team 1

The interviews appear comfortable with using ICT as a mediator for interactions and communication where they have been able utilize them in their daily work regarding their digital competency. The ICT has brought communicative changes and while not entirely flawless, it appears to have worked quite well for the interviewees.

5.3 A need for active leadership

From the interviewees there is a clear indication that the leadership has been through changes to overcome the constraints brought by the increased virtuality. The leadership has been perceived differently by the interviewees both positive and negative. PL1, Team 1 expresses their concern as a leader when they first started working virtually:

I don't talk to everyone every day and you do that on a regular day in the office and I miss that. Sometimes it feels like you're losing your grip as a leader. - PL1, Team 1

While in Team 2, PM4 describes their experience of the leadership as positive:

But I also think that the leadership has been good [...] coming out with regular weekly emails or such where we discuss how it's going and what people are doing. - PM4, Team 2

Another leader states that the leadership has changed since leaders need to be more active in their interaction with their team:

[...] However the leadership in the project and in teams has changed. Because now you need to be more active, outreaching and actively question more than you needed before. - PM3, Team 2

[...] You lose the daily interactions [...] But the positive is that as long as you acknowledge it and be more active in talking to others, especially as a team leader and a project leader you need to be active and actually communicate with the people you work with. - PM3, Team 2

Being an active leader means showing that you are available for you members, as PM2, Team 1 expresses:

It's something that must come from both sides [...] sometimes when you check Skype it's a bit difficult [to know] if someone is working, taking a break, or having coffee or a walk [...] I try to always have my phone on me, if someone sends me an email I try to answer as soon as possible, so faster than previously [when working in the office]. - PM2, Team 1

PL2, Team 2 states that a leader not only needs to be active, but also needs to be clear, precise, and more prepared in their communication than before:

You also learn that you must be even more clear and have a very clear agenda. You must prepare your material very well. You can't improvise as much, you need a solid foundation for all that you do. - PL2, Team 2

As a project leader it always requires for me to have structure and know what needs to be done, but even more so now[...] - PL2, Team 2

The leadership appears to be perceived differently by the interviewees but there is a unanimous perception of the leadership where it requires new or enhanced competencies and behaviour compared to when working face-to-face to be able to influence and manage their team members.

6. Analysis and discussion

In this chapter the previously presented empirical material will be seen in the light of the theoretical frameworks employed as well as through the discoveries of previous research.

6.1 Team processes

In this section the findings related to that of the team processes will be analyzed, as to understand how the teams were affected by working virtually, and consequently how they adapted to these changes.

6.1.1 The challenges of virtual onboarding

In the empirical findings the process of onboarding quickly distinguished itself as a topic that the interviewees felt very passionately about, telling for the way it appears to have generated new behaviours amongst the teams.

The empirical findings suggest that onboarding new members into pre-existing project teams has become a more challenging process in virtual teams, compared to face-to-face teams. The reasons for this can be derived specifically from the moderating effect of virtuality, an issue also identified by previous research (Espinosa et al., 2006; Lilian, 2014). The first way in which virtuality has affected this process is by a decrease in spontaneous interactions taking place, thus reducing the opportunities for creating trust in informal situations. Many of the interviewees reference the talk at the coffee machine, both literally and figuratively, as something as a natural space where they can interact with new colleagues. This spontaneity is deemed hard to recreate virtually, thus placing more of the burden on the individuals involved to initiate interaction. According to research it is exactly these informal and spontaneous interactions that are great facilitators of finding common ground, creating trust and conducting the process of social comparison (Espinosa et al., 2006). Incongruent perceptions are more likely to arise as the new team member now has fewer interactions, and fewer informal ones at that, to help navigate the cognitive landscape of their new team. By getting less time not only one-on-one as stated by multiple interviewees but also fewer opportunities to socialize in larger groups, new team members run the risk of forming incongruent perceptions of their new team (Conner, 2003; Greenberg et al., 2007; Romeike et al., 2016). What has happened is that the creation of trust, or even the first point of contact between new and old members, are mostly limited to task-related project meetings and organized social hangouts which are few and far in between. The team leader cannot take a tour of the office with the new team member and walk from desk to desk introducing them to their new colleagues. In this regard the moderating effect

of virtuality weakens the strength of the relationship between the input of leadership, and the cognitive process of onboarding.

Encompassing the difficulties faced by the teams interviewed in the onboarding process are not only tangible factors such as the decrease in spontaneous interactions. One aspect of the cognitive process of onboarding that is described as especially difficult is the emergent state of SMM's, and getting the new team members integrated in these, especially as the rest of the team have previous experience of working together face-to-face (Maynard & Gilson, 2013). Getting a new team member aligned with the existing SMM is a challenge for any team (ibid.), but with the rest of the team having this face-to-face experience with each other, yet another hurdle is created. The empirical findings indicate that the team SMMs, those related to the mutual understanding of team norms, have not entirely reached the newcomers. This is portrayed by one interviewee describing a visit to the office as being overwhelmed with questions by a new team member regarding these issues, compared to any other day which was spent working from home. Thus, whilst the interviewees do not attribute any real challenges to the use of ICT, the empirical findings indicate that it is not what happens when using ICT, but instead what does not happen that poses a problem. As showcased by the interviewee visiting their office, it seems as if merely being in the same physical space enabled interaction to take form to a greater degree than virtually. The newcomers in these teams have their integration into team SMMs hindered by reduced opportunities, both in terms of frequency and information-richness, to interact regarding topics other than those related to tasks, which dominate the team's discourses. It is also due to this that the task SMMs with greater ease are communicated to the newcomers, as getting them up and running and completing tasks are prioritized.

With the perceived difficulties of connecting with colleagues through various ICT such as video conferencing, the conditions appear to not be optimal for a quick and seamless onboarding. The question that virtual teams and their leaders thus must answer is what can be done virtually to accomplish that of face-to-face onboarding, and how opportunities for conducting social comparison can be replicated virtually. The empirical findings show how the studied teams have taken on a form of shared leadership, where the responsibility of facilitating interaction between new and existing team members is decentralized. The implications for the virtual team

member are thus that they will benefit from possessing certain attributes such as being extroverted and communicatively skilled, as in line with previous findings (Staples et al., 2008). PM2, Team 1, describes how they are actively communicating their availability to new colleagues to facilitate dialogue and to help answer any possible questions. Thus, there are features of shared leadership, or distributed responsibility in the onboarding process, that can be undertaken to ease the onboarding process in virtual teams, as found in previous research (Greenberg et al., 2007). Some of the leaders interviewed shared that they had designated parts of the onboarding to take place face-to-face, even with the rest of the team working virtually, as they perceived this to help ease the process. This approach is not uncommon, even for virtual teams who are deemed to have a high level of virtual-ness, and work completely virtually otherwise (Hertel et al., 2005). This is the case for PL2, Team 2, and PL3, Team 3, who say that they have successfully been able to bond and connect with new colleagues, but not without conducting part of the onboarding or having an initial meeting face-to-face.

6.1.2 The virtual implications for trust

The teams interviewed for this study all had prior experience of working together face-to-face before making the shift to working virtually. The empirical findings indicate that this was a very influential factor in the teams maintaining high levels of trust, as it was this experience that was often referenced by the interviewees when reasoning as to why that was the case. It was also often contrasted with the perceived difficulties of creating trusting relationships with new team members, showing how trust as an emergent state varies in its strength based on processes such as these, as similarly found by Mathieu et al. (2008).

The empirical findings show that trust that has been created face-to-face can be carried over into a virtual one, even with limited maintenance of social relationships by way of hangouts and social interactions taking place afterwards. The empirical findings also indicate that a period of adjustment or learning-by-doing took place surrounding issues such as communication, meetings, and the use of ICT. What this tells us is that trust has remained high as it was solidified in the face-to-face setting. Instead, what to a greater extent has been impacted by the shift to working virtually, is the emergent state of the team's SMMs. The norms for interaction, whether it regards communication that is text-based or video-calls, and if it is okay to call another person in the team without first sending them a message, are quirks and

mutual understandings that the teams had to develop over time. Given the challenges of participation and turning on their camera, the virtual team's reliance on ICT to facilitate opportunities for creating trust becomes even more difficult. Creating team cognition is a process which requires intimate and intense human interaction, and if the team members do not fully make use of the richest medium available, video conferencing, then the forming of especially team SMMs will be harder to achieve (Maynard & Gilson, 2013). With the communication in the teams heavily skewed towards tasks and with the challenges faced in creating team SMMs, highly interdependent tasks possibly run the risk of becoming more challenging to conduct (Maynard & Gilson, 2013; Staples & Webster, 2008).

The empirical findings contain indicators of possible threats to trust that have been brought up by multiple interviewees. Firstly, when creating and maintaining trust in virtual teams, communication is a potentially decisive component (Gibson & Manuel, 2003). Technology fallacy, whereby faith is placed in the ICT to solve problems, could judging by the empirical findings be a future risk if human intervention does not occur. In the empirical findings we can find described how the interactions suffer from limitations imposed by the ICT used. Specifically, with the ICT lacking in information-richness it has not fully been able to facilitate trust-facilitating interactions within the teams. When discussing video conferencing and its use in facilitating opportunities to create trust and social stimulation, one interviewee describes it as “fake” and “forced”. What is thus required of the leaders and members alike, are certain skills and knowledge of how to bridge the gap created by the less information-rich mediums for communication. It is critical that these abilities are developed within the virtual team, as previous research has shown it to be critical in the long-term health of not only a virtual team's level of trust, but its ability to become more efficient and make the most of the ICT used (Rosen et al., 2007).

As previously discussed, the process of social comparison appears to only become a problem when undergoing the process of onboarding a new team member, with the pre-existing members already having conducted this process sufficiently when working face-to-face. Still, with previous research showing that if not opportunities for social comparison are not facilitated to a greater degree, the process of social comparison runs the risk of being based on incongruent perceptions (Cheshin et al., 2011; Romeike et al., 2016). This goes for the team members who

have worked together face-to-face as they become distanced from each other, as the empirical findings show these opportunities to not have been equivalently replicated in the virtual setting. This is by the interviews described as due to a decrease in social interactions, such as social hangouts outside of work hours. Social gatherings such as dedicated time for fika or more informal meetings are arranged but are met with mixed reception and participation. Additionally, not only can a decrease in social time shared amongst the teams be seen but related to this many interviewees also pointed to an increased state of independence when completing their tasks. With the building of trusting relationships being complex processes, and with a decrease of interdependence both in terms of sociality and in tasks, there are signals of challenges for creating long-term and stable trust (Hertel et al., 2005).

So, what has happened for, as many interviewees claim, the teams to be able to maintain high levels of trust? This was by the interviewees often referenced as somewhat intangible factors such as learning-by-doing how to communicate or complete certain tasks. Mistakes regarding the use of ICT or how to communicate and collaborate virtually were made, especially in close relation to the shift to working virtually. This can be traced back to the boundary condition of the teams' experience of working together whilst collocated, which can be said to have created a foundation of trust, patience, and caring amongst the team's members. The affective team process of cohesion was thus well-established (Dulebohn & Hoch, 2017). What the empirical findings do indicate is that some action has been undertaken that can aid in generating opportunities for social comparison, even if that is not the outspoken reason given for doing so. Namely, the increase in daily or weekly meetings can be seen across all teams. The interviewees have described these as useful for staying up to date with what goes on in their team, and leaders such as PL1 have described them as "necessary", as they are their only real way of managing the entire team at once.

6.1.3 The virtual barrier hindering participation

The conducted interviews showcase various effects of working in a virtual setting, for project leaders and members alike. One of these challenges shared by both leaders and members that the empirical evidence highlights, is the multifaceted struggle of participation. The want and need of employees to interact with one another by way of social, non-work-related gatherings

is shown in previous research to remain high when transferring to working virtually from an office environment (Bartsch et al., 2020). The need to be socially stimulated simply does not cease to exist, as is shown by the empirical findings in this study. Thanks in large part to the opportunities for interaction provided by the ICT used, these social gatherings can continue in a virtual work environment. Still many interviewees admit to not taking part in many of these organized gatherings, whilst at the same time expressing great longing for socializing with their colleagues. So why this self-contradictory stance? One reason could be the feeling that the virtual gatherings cannot reciprocate the same social stimulants as a physical meeting due to the constraints of ICT as expressed by several members of Team 3. According to the empirical findings these constraints seem to hinder one-on-one contact, raising formality while also increasing the chance of interruption and misunderstandings. More of these communicative changes caused by ICT will be discussed in the upcoming chapter. It appears though that a large part is because virtual workers experience greater freedom of choice in how to dispose of their time: it is the employees own freedom of choice that prevents them from taking part of what they actually want. There are no external obstacles that hinder them from taking part in virtual hangouts or coffee breaks with colleagues. Instead, it is the moderator that is virtuality, that superimposes itself on the employee's ability to participate in non-work-related activities, by way of their inclination to continue working throughout the day due to the distraction-free working environment. It is the reduced number of distractions, a result of working from home, that leads to a more independent state of working. Thus, virtuality has great bearing on the social aspects of the behavioural team processes.

According to the empirical findings there is an indication of a barrier of virtuality that acts as a reliever of the social norms and duties that are included when working in an office environment as it enables the interviewees to easily abstain from social gatherings, with one interviewee describing it as a "relief" not having to say no to someone's face. It is thus not only those that wish to socialize but keep on working that abstain, it is also those that do not wish to participate that now more often can refrain from doing so than compared to when in an office environment. This reduced participation could affect the processes of relationship building, and in turn the levels of motivation and likelihood of the team becoming a tight-knit group working hard for each other (Tseng & Ku, 2011). Still, the empirical findings do not suggest reduced cohesion within the teams, instead this study indicates that the fact that the teams had previous experience

of working together helped retain their cohesion (Tseng & Ku, 2011). Instead, many interviewees were quick to point out a reduced capability of integrating and onboarding new project members as indicators of threats to the level of team cohesion. Still, this reduced participation on the behalf of the existing team members needs to be acknowledged, as if the level of participation stays low in these teams it could in the long-term result in decreased cohesion and motivational team processes. A lower motivation could then lead to a decrease in the outcome of individual members' satisfaction (Robert & You, 2018).

Whilst the empirical evidence indicates that many interviewees perceive the lack of social stimulation to not affect their decision making, or their motivation to complete work tasks, this could still be an area of concern for project leaders. Facilitating opportunities for team members to bond and interact, studies have shown to positively influence team members' trust in each other, as well as emergent states such as their collaborative ability and cohesiveness (Liao, 2017; Bartsch et al., 2020).

6.1.4 Team members autonomy

The working habits in the teams has clearly been altered in some aspect by the increased virtuality according to the interviewees. Their homes becoming their workplace is seen as a major reason behind this change of habits which can be explained by the increased availability this brings. PM4 and PM5 that work in the IT-industry have felt that the work is always close by and easy to access compared to before when work was locked away at the office, especially now when the work itself can be encapsulated in a laptop. According to the empirical findings this indicates to have given team members an increased autonomy, a greater freedom of choice regarding their daily routines but also more individual responsibility to manage their time and tasks. There is a divide between the interviewees regarding the perspective of more freedom to delegate their time, where several mention that they can invest more time in working due to the decrease of disruptions and thus increased their productivity. While other interviewees and especially in Team 2 and 3 where some perceive that their productivity has not changed. Even in the same teams the opinion differs and there is not a unanimous perception of productivity. The empirical findings also indicated an increased level of independence as a side effect of an increased autonomy and productivity, which could in the long-term lead to a feeling of isolation

from the rest of the team due to reduced involvement in social occasions (Kirkman & Bradley, 2002).

As concluded in the earlier chapter, the empirical findings have indicated a decrease in the want of participating in social gathering which could be the reason behind the sudden increase in productivity. Team members can now more easily abstain from social gatherings that often occurred at the office and focus on the work instead. The interviewees have also perceived that there are less distractions when working virtually since there are no more natural breaks from spontaneous interactions with colleagues that often occurred at the office. Combined with the reduction of time spent traveling to work and to customers, the teams seem to have overall more time and the freedom to spend them at their leisure. These three factors seem to be prominent reasons behind the increased productivity according to the empirical evidence.

The empirical findings indicate that this increased productivity is not entirely positive, a backside stated by the interviewees is that they must actively decide their own work hours. On one side team members have a greater responsibility over their time but on the other side they also need a higher discipline to stay within the established work hours. This does not necessarily mean that they work overtime but rather a change in their work habits, regarding at which time they are working. For example, PM4 prefers to work in the evening since there are less distractions from work. While PL3 expresses that it is hard to disconnect from work when it is close by and especially when other team members are still working due to incoming messages and the urge of helping their members, no matter the time. Thus, the new work habits and routine in the virtual teams has not only affected the team members, but it has also affected the boundary conditions such as team norms which influences the behavioural team process.

Overall, the interviewees still have a positive attitude towards working virtually regardless of the potential consequences. The empirical findings indicate that the increase in autonomy for team members may be a reason why the teams seem positive and emit general satisfaction. This corresponds with Robert and You (2018) findings that the degree of autonomy an individual has regarding their task increases their satisfaction and team members that are satisfied are more motivated to contribute to the team. Thus, the increased autonomy indicates a positive effect on the motivational team processes.

6.2 Implications of ICT

The empirical findings show that all the teams regardless of technological competence or degree of virtuality in general have taken well to working virtually, albeit with its sets of challenges.

Communicating through these mediums have thus posed these challenges, experienced similarly by both leaders and members. As a result, the empirical findings indicate self-imposed demands regarding their own communicative behaviour to communicate “properly”. These demands were often described as: greater preparation, precision, consistency, and transparency when communicating both one-to-one, but also in larger groups. These attributes of what the interviewees perceived as required of them to communicate properly in a virtual setting, align with previous research on virtual communication (Marlow et al., 2017; Newman et al., 2020; Nydegger & Nydegger, 2010). Several interviewees shared a perception that an increased threshold for initializing communication appeared throughout all the teams. This exemplifies one of the challenges facing virtual teams: they are unable to make use of non-verbal cues such as miniscule facial expressions like the raising of one’s eyebrows to catch a colleague's attention when needing help with a minor problem. When asking for the help of a team member, a process which is vital to a good collaborative environment, it requires a higher effort and team members may refrain from asking for help at all (Van Waes et al., 2015). While other interviewees state the opposite, it is easier and more effective to contact other team members through ICT since team members are more likely to be available when they are only working from home.

The main ICT used in the teams was a video-conferencing tool to replicate physical meetings and for sending instant messages. Due to the increase in meetings and check-in’s video-conferencing tool has been the most utilized ICT and therefore mostly nuanced in the empirical findings. The teams seem to have followed Newman et al. (2020) suggestions of using a synchronous communication tool that has enabled more effective communication in the task complex environment where the video-conferencing tool has been deemed as the most suitable option. The interviewees state that they have used other tools as well, such as email and instant messages but they have expressed a greater concern regarding the video-conferencing tool. Derived from the empirical findings there are certain constraints with video-conferencing tools that were prominent such as hindering one-on-one contact, harder to read in behavioural and

nuances while also increasing the chance of interruption and misunderstandings. This concurs with the findings of Lilian (2014), Newman et al. (2020) and Nydegger and Nydegger (2010) that there is an absence of non-verbal and social cues in virtual teams. One reason behind the video conferencing issues is the lack of engagement within these virtual meetings, according to the empirical findings. Several interviewees express a lack of incentive by their team members to turn on the camera during meetings which reduces the richness of the communication and prohibits nonverbal and social cues. This negative side of video conferencing may be the reason why some interviewees feel as if the social gatherings are not as valuable and why there is a lack of participation in the social occurrences. On the other hand, the teams still have a positive experience of using videoconferencing for more formal meetings. Video conferencing has proven to be a great alternative to physical meetings, but the empirical evidence indicates that a video conferencing tool may not be suitable for facilitating social contexts and instead seems most usable in a formal setting.

Many of the interviewees describe a learning curve that occurred as the shift to working virtually was made, where a period of trial-and-error took place. The need to communicate comprehensively when discussing complex topics was for PL2, Team 2 a result of the back and forth of many conversations being conducted through various ICT-tools. This resulted in an increased volume of messages, and thus served as learnings for many interviewees to leave no room for ambiguity in their written communication. The interviewees are by their own accounts adaptive; learning from the limitations of the communication technology at their disposal, and at least attempting to overcome the challenges imposed on them. They can therefore not be deemed to have fallen into the trap of the technology fallacy where all faith is placed in the ICT to solve encountered problems (Kane et al., 2019). Thus, the empirical findings showcase how the interviewees have adopted communicative behaviour fit for the virtual setting and that there were no discernible differences amongst the teams based on technological competence.

Bruque and Medina (2002) describe the concept of the technology paradox, where the use of ICT does not generate the productivity gains expected. All interviewees stated that they in themselves had perceived an increase in productivity, or at the bare minimum had maintained their level of productivity as when working face-to-face. The circumstances for the shift to working virtually were of course forced upon the teams studied here due to the COVID-19

pandemic, so the shift was not made with the intention of increasing productivity. What is noteworthy though, is that the empirical findings do not indicate that the use of ICT is the reason for the increase of productivity. Instead, the interviewees describe the absence of distractions, a decreased level of participation, and an increased autonomy as the reasons for their increased productivity. Similar findings have been made previously (Martins et al., 2004), showing how it is not what the ICT brings to the team, but the consequences of what it replaces that has a more prominent effect on improving productivity.

The teams did not exhibit a lack of technological competence and were therefore able to utilize ICT for their purposes. The difficulties with ICT were rather about the communicative behaviours the teams needed to adopt to overcome the constraints. Thus, the ICT itself has not solely contributed to the teams' success; it is the team members efforts to adopt that has been the key factor for their team's success in utilizing the ICT in an effective manner. This indicates that ICT as an input has had a major impact in the behavioural team processes especially regarding the team's communicative behaviour.

6.3 Virtual leadership behaviour

The empirical findings show that the leaders, albeit to different degrees, mainly have employed a task-oriented style of leadership, and in the following section we will analyze the reasons for this and what more in-depth behavioural changes have occurred amongst the leaders.

6.3.1 Leadership and trust

Regarding maintaining and developing trust, a more active approach has been adopted by some leaders, with the reasons for this being motivated by the limitations of ICT-mediated interaction. One team leader described having urged their team to communicate more frequently than in the face-to-face environment. This insisting on part of the leader was done to avoid having the team members becoming too individually autonomous and confined to their own space. Still, what can be extracted from the empirical findings is that these pre-emptive actions on the behalf of the leaders mainly are conducted in relation to maintaining a cognition-based trust, and with less concern for affect-based trust (Staples, 2001). Actions have been taken to

maintain the leader's insight into the progression of the project, with weekly or even daily meetings becoming the norm for many. Coordinating and overseeing the advancements made within the project are described as key tasks for the leaders, whilst the efforts made to retain or even examine the levels of affect-based trust are lower. One leader describes not having been made aware of any unrest or lowered levels of satisfaction since making the shift to working virtually, indicating that the efforts made on the behalf of the leader to stay on top of this issue are low. Thus, the increase in formal meetings and check-ins amongst all the teams, and the more informal gatherings arranged in some of the teams, although still lacking in participation and engagement points to a more cognition-based trust forming amongst these virtual teams.

6.3.2 Difficulties of employing a relationship-oriented leadership

As stated by PL3, Team 3, the nature of their team's day-to-day work has become considerably more restricted to dealing primarily with tasks, coordination, and deadlines. Their own focus has shifted to being mainly concerned with keeping track of and maintaining insight into the task-progression of their team members. These views, shared by the other leaders, are signals of a fundamentally task-oriented leadership, where the focus lies on managing the progress towards goals and task completion (Bartsch et al., 2020). The task-oriented style of leadership is not as tailored towards everyone within a team, and thus has consequences for the team members' experiences (Liao, 2017). Team members describe finding it harder to make their voices heard and be seen in larger group gatherings. The information-richness of ICT tools such as video conferencing is poor in comparison to when all team members are gathered in an actual conference room, something multiple interviewees bring up in contrast to the virtual alternative. In a video-call, facial expressions, and other non-verbal cues such as miniscule facial expressions like the raising of one's eyebrows to cannot be used to the same extent to catch a speaker's attention, and not all of the ICT tools used provide functionalities that replicate these virtually, resulting in a communicative nature that is not as rich as it is face-to-face (Newman et al., 2020). Now this is not inherently a trait of the leadership employed by the leaders, more so it is a result of virtuality that thus weakens the relationship between leadership as an input, and its efforts to facilitate various team processes such as the maintenance of team cohesion. With these strains that ICT puts on leaders of virtual teams, Maduka et al. (2018) has found that the individuals who are more extroverted and highly communicatively skilled have the best conditions to succeed. Going by the empirical findings, what makes the challenges faced by

leaders of these teams especially tough are that they are to some extent intangible. The nature of communication in virtual teams are as previously found to be more task oriented (Maduka et al., 2018; Marlow et al., 2017). The implications of this are far-reaching: as stated by PL2, Team 2, it is not entirely up to the leaders themselves to overcome this barrier that is in the way for social discourse. The responsibility of initiating relationships is distributed, not only reducing the leader's role in maintaining social relationships, but also leaving more up to the individual team members. This results in shared leadership, as the leader alone cannot prevail in this issue, the dialogue and relationships must consist of mutual interest and engagement. Thus, it appears that leading in a relationship-oriented manner requires greater efforts than that of the task-oriented style (Liao, 2017). Still, the incentives to sufficiently facilitate social relationships are there for the leaders, as they have shown to be a keyway in which to create affect-based trust (Cogliser et al., 2013).

6.3.3 Implications for the role of leadership

For leaders, the challenges accompanied by the shift to virtual teams have resulted in them needing to adopt new ways of managing their teams. Most notably, a recurring description used by leaders and members alike was the need for the leader to maintain an active presence within the team. This concurs with previous research that promotes a more active leadership to influence team members in virtual teams (Huang et al., 2010; Liao, 2017). This approach garnered positive response amongst team members and was deemed by many interviewees as a necessary attribute for leaders of virtual teams to possess. In more detail, this form of active leadership is seen to be composed of a certain set of attributes. Firstly, the exchange of communication between leaders and members had by some interviewees been judged to be in the need of increased reciprocity. Whether lacking on part of the leader or the member, an imbalanced rate of exchange can have damaging effects on the levels of trust within a team (Bell & Kozlowski, 2002). As found by previous research, leaders' simply increasing the frequency of their dialogue with their team members will not suffice, instead that dialogue will benefit greatly in regard to trust by clear deliverance of feedback and empowerment (Bell & Kozlowski, 2002; Mathieu et al., 2008). With both leaders and members describing an unsureness regarding how and through what channel it is appropriate to deliver acknowledgement of accomplishments or feedback, the ease of which to empower one's team cannot be said to have been transferred fully from a face-to-face setting to the virtual one. The

difficulties of challenges faced by leaders such as these, are by previous research found to be prone to be exasperated at a later stage, culminating when the levels of trust eventually do deteriorate (Matieu et al., 2008; Maynard & Gilson, 2013). A lack of feedback and empowerment are not problems that are easily quantified, as these cognitive processes can vary regarding how long it takes to affect different individuals. With the task-oriented form of communication dominating in the teams, and a focus being on achieving good results, team leaders should be wary of ignoring the aspects of sociality and relationship building, even if they are not as easily identified.

With the ICT used in virtual teams lacking in terms of information-richness and often being asynchronous at that, leaders must make up for that gap in the exchanges taking place between leaders and members. A high awareness of their team emergent states such as the trust and team cohesion, and how these states fluctuate throughout time, become more necessary for the leader in a virtual setting (Staples et al., 2008). Without possessing the sensitivity and people-skills to know how and when to intervene in these critical team processes, the challenges imposed by virtuality will overcome the incapable leader (ibid.).

6.4 Summary

Onboarding is a cognitive process that has been experienced as challenging for team leaders and members. This is especially due to the moderating effect of virtuality, with less interactions taking place and providing less opportunities for the newcomers to take part of existing SMMs, which are needed to establish common ground and trust to prevent incongruent perceptions arising. The emergent state trust has perceived to have remained high since making the shift to working virtually. The virtual setting has put strains on the team's abilities to take part in qualitative and valuable social interactions, with opportunities for social comparison becoming increasingly limited. Whilst the teams perceive trust to remain high, these findings serve as indicators of possible threats to the long-term stableness of trust and cohesion. Participation is a motivational process that has been affected by way of a virtual barrier arising, that has relieved the pressure of social norms and made it easy for team members to abstain from participating. This has caused a focus on the tasks at hand, and actively choosing work in the place of socializing. The changes experienced in these team processes has led to a perceived increased state of autonomy. Due to a decrease in distractions, a lack of participation in social gatherings,

the interviewees perceive an increase in their own productivity, accompanied by a heightened level of autonomy. With this new routines and boundary conditions have emerged, altering the way the individual interviewees approach their work. The adaptation to relying fully on the use of ICT has been made well by all the teams. ICT can be seen to have a strong relationship with the behavioural processes, not affected by an individual's respective technological competence. The team's communicative behaviour has seen changes, both due to the limitations and possibilities provided by them. The leaders can be seen to have employed a more active communicative approach, to prevent team members from becoming isolated. A task-oriented leadership has been employed, and this is mainly down to the limitations of ICT that has reduced the leader's ability to socially engage their team members. These issues of creating relationships and bonding have also been perceived to be of varying importance, partly due to the teams having worked together face-to-face. Therefore, a task-oriented focus was mainly present in the teams where leaders prioritize the tasks rather than facilitating trust and cohesion by strengthening already established relationships. The maintenance of relationships has shifted to being a distributed responsibility between members by adopting a shared leadership, a further indication of the ways in which the leaders' roles in their teams have changed.

7. Conclusion

The purpose of this thesis was to create a greater understanding of project teams who had made the shift from working collocated to virtually, in the context of the COVID-19 pandemic. By scrutinizing the implications of the virtual setting on both team leaders and members, the research question aimed to be answered was: How has working virtually affected the team processes of previously collocated project teams? Additionally, the role that leadership has come to play in these teams was to be answered.

As this study has studied the team processes within virtual teams by way of a cause-and-effect framework that examines the relationships between these processes and their inputs and moderators, we have been able to discern what role the leaders of virtual teams have played in these teams. Firstly, the consequences of relying solely on various ICT for purposes of communication and interaction has posed its challenges for the leaders in their work to develop and maintain affective and cognitive team processes. The complex cognitive processes of social comparison and the creation of affective-based trust are seriously hindered by, as it is perceived by some interviewees, the inauthenticity that ICT brings when trying to do anything not directly task-related. Thus, the leaders are disadvantaged from the outset when aiming to maintain social relationships within their team. A somewhat paradoxical factor soon emerged in the findings, namely that the team's pre-existing trust that carried over from their time working collocated, relaxed the intensity of which the leaders perceived that they had to build up trust in the virtual setting. A pre-existing high level of trust thus caused the issue of trust to not be prioritized. Instead, a task-oriented style of leadership was employed, both because of the aforementioned difficulties brought on by ICT but also as enabled by the perceived lack of urgency in needing to build and maintain trust.

As this study has looked to answer what role the leader has had in the virtual team we have been able to understand the challenges they face, the up- and downsides of the employed leadership as perceived by both leaders and members, and indications of possible threats to this in the long-term. The latter can be seen as one of the central takeaways from this thesis, that going forward, where many teams are looking to make their shift to virtual permanent, leaders

and members as well, must be made aware and trained in the new demands that virtual teams will put on them.

The cognitive process of onboarding new members into pre-existing teams has proven to be much more demanding in the virtual setting. The analyzed empirical findings indicate that the task-dominated discourse in the teams, coupled with a notable reduction of informal social interactions, places more responsibilities on the team members to contribute to this process. This as to not risk falling into the trap of the technology fallacy and placing the responsibility on the ICT, as the ICT on its own falls short in facilitating the interactions necessary to fully onboard a new team member. We can see that spontaneous interactions are ascribed great importance by the interviewees, but that they are not sufficiently recreated in the virtual setting, as it now demands of the initiator to overcome this virtual barrier, and those team SMMs simply appear to not have been fully fledged out yet. The consequences of these difficulties associated with onboarding thus have certain implications for the team members, who appear aware of the actions they must now take to overcome the virtual barrier. Shared leadership has emerged amongst the teams, with the communicatively skilled team members poised to better adapt to take on this increased responsibility. This does not mean that the role of the leader of virtual teams is necessarily diminished, more so that the leader of virtual teams runs the risk of a decrease in many regards such as trust, cohesion, and participation if they are not capable of involving their team members. With experience of only working in collocated teams, the leaders in this study must adapt just like the virtual team member must, and to a greater extent be willing to interact with newcomers, and not let the ICT put distance between them. This serves as an explanation as to why shared leadership emerges as somewhat of a necessity for the actual leaders; it will help in the integration of newcomers but also create a more tight-knit team.

By interviewing leaders and members belonging to the same teams, both sides have been heard in how they have perceived leadership to affect the multiple team processes. Leaders and members alike both perceive the leadership and members needing to be more active in their interaction and communication whether it be task- or social-related, and the study can demonstrate that the teams would benefit from realizing these ideals. A mutually engaging communicative approach will help prevent the increased autonomy from turning into isolation by engaging members in social interactions (Kirkman & Bradley, 2002). Furthermore, the study

has been able to identify that much of the leeway that the team leaders have had to work with, as in terms of not having to prioritize relationship- and trust-building, comes from the team's previous experience of working collocated. So, whilst this has enabled a greater task-focus, problems arise when new members are onboarded. The team SMMs are rooted in trust built face-to-face, meaning that the newcomers' starting point for generating these important relationships are at a disadvantage. Thus, these studies' findings indicate a need for teams aiming to make the shift from working collocated to virtually to be aware of and pro-actively work to handle this gap.

This thesis has proven that the degree of virtuality the teams has experienced has altered their way of working and proved new opportunities with ICT. With the adoption of working virtually, these prior collocated teams have now brought their work home. As the empirical findings prove, this has had both positive and negative implications for the work environment. The work is now always available and not locked away at the office, which has given team members a greater freedom regarding how they spend their work time. With greater freedom team members are more likely to choose work over social occasions that will prohibit them from continuing their work. Combined with absence of spontaneous interactions, productivity has increased for several team members but at the cost of less social interactions. This has given team members a greater responsibility to do their work, interact, and collaborate with their team, and thus have team members been given greater autonomy by working virtually. As a side effect of the increased autonomy, there have been indications of changes in the boundary conditions of the teams where team members are working late into the evening and for longer periods, which could have implications on the team members work-life balance and the overall behavioural team process. On the other hand, higher autonomy may be one of the reasons why team members emit a general satisfaction towards work virtually, thus affecting the motivational team process.

As team members have been given greater autonomy, the responsibility between leaders and team members has been distributed. Team members have now a greater responsibility for maintaining relationships within the team by taking their own initiative for interaction than before while leaders have adopted a more task-oriented focus, where structure and guidance are of essence. Thus, team members have indirectly adopted shared leadership by the increased

autonomy created by the high degree of virtuality imposed on the teams. Based on the thesis' findings, autonomy can be seen as a potential moderator between the input of leadership and the team processes, especially regarding the behavioural team process that facilitates shared leadership. In essence, autonomy has changed the implications of what it means to be a leader of virtual teams, while also imposing requirements regarding the behaviour of team members.

8. Contributions, limitations, and future research

This thesis has contributed to a growing domain of research, namely how the team members that make up teams have been affected by working virtually. Specifically, this thesis has taken hold of an issue that is of higher relevance than ever before due to the COVID-19 pandemic, that is the way in which collocated teams have their team processes affected by shifting to working virtually. This thesis contributes with greater insights regarding what collocated teams looking to work virtually must be aware of, most notably the ways in which the maintenance of relationships and trust amongst team members must be the recipient of active efforts, on the behalf of leaders and members alike. Otherwise issues such as these, which for the leaders become more difficult to notice and for the members to verbalize, run the risk of escalating and only being seen as a problem when it is already too late. This active approach also permeates the leadership in general, as both structured and spontaneous interactions between members and leaders serve to keep leaders in the loop, but also to prevent member-autonomy from turning into member-isolation. This thesis has also seen that virtual team members will benefit from re-thinking the ways in which they interact with the rest of their team, acknowledging that the increased responsibility to manage their own time and tasks also includes the responsibility to participate and contribute to the creation and maintenance of team cohesion, as the virtual leader alone cannot do this.

This thesis has studied three teams, and within each a sample of two members and their leader. Thus, not every one of the team members' experiences will be reflected in the empirical findings of this thesis. The thesis findings can therefore not be generalized but can provide applicable insights for similar contexts. What also must be considered is that although the interviewees all had worked a considerable time in a virtual team, their reflections over their attitudes towards working virtually and what efforts they put in for example socializing whilst in a virtual team, could be affected by the context that they operate in. At the time of conducting the interviews, the COVID-19 pandemic appears to be nearing its end in Sweden, and restrictions are slowly being lifted. Thus, a mindset of the interviewees working in a virtual team as only a temporality has affected their behaviour and their answers in the interviews.

Future studies could employ an observational study to gain even more detailed insights into the changes that the team processes must undergo, and this could be deemed especially useful if studying teams as they make the shift going from collocated to a virtual constellation. The teams studied in this thesis had all experience of working together in a collocated constellation. Future studies are very likely to uncover differing results if studying teams that start off in a virtual setting without this prior experience, and comparative studies would surely generate interesting results if analyzing the difference in time, effort, and behavioural changes that take place between teams who have and do not have this experience. With regard to the findings in this thesis and the indicators of threats to long-term trust, a longitudinal study would likely be able to discern if the task-oriented style of leadership employed in the teams studied here, are sustainable or not.

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Appendices

Appendix A. Consent form

Consent form for interview participants

Information about the research project

Researchers for this project are Niklas Allard and Eric Cagenius, within the framework of the master's program in Management, Communication and IT at Uppsala University. By way of this project, how teams have adapted to the change of going from working co-located to working virtually, is intended to be examined in greater detail.

Information about participation in the research project

Participation in this research project includes making oneself available for an interview with the two researchers. The estimated time of the interview is 30 minutes. The interview will be conducted via the video meeting application Teams, where an invitation is sent to the participant from the researchers by e-mail. The interview will be audio recorded, for the purpose of facilitating transcription of the interview afterwards. The audio file will be deleted after the full transcription has been made.

Information about the results of the research project

The participant will be able to take part of the results of the research project via the database Diva-portal.org, a digital platform for publishing research projects, essays, and publications by researchers and students.

Information about the participant's rights

It is completely voluntary to participate in the research project. The participant can choose to cancel the interview at any time and does not have to give a reason for this. The participant also has the right to withdraw their consent after the interview has been held. The participant's identity remains anonymised throughout the research project. The participant's work role will be referred to as 'project leader' or 'project member'. Any questions, or withdrawal of participation in the research project, are made via e-mail by the participant to one or both of the researchers: cagenius.eric@gmail.com or niklas.allard96@gmail.com.

Consent to participate in the research project

I have read and understood the information about the study given in this document. I have had the opportunity to ask questions and I have had them answered. I may also keep a copy of this document that I signed.

Appendix B. The selected quotes from the empirical findings, including the original quotes in Swedish

Team 1 - Trafikverket

PL1, Team 1

You must place trust in the people you work with, that they will finish their tasks.

Man måste ha tillit till att de människor man jobbar med, att de utför sina arbetsuppgifter.

[...] it becomes more dynamic when you turn on the camera, it becomes a different meeting when you can look them in their eyes.

[...] det blir ju mycket mer dynamiskt när man sätter på kameran helt klart, det är annan typ av möte, då får man titta på personen i ögonen.

[...] I actually believe that the threshold is maybe a little higher when sending an email or calling on Skype instead of going to someone's office and asking a question. I actually believe the threshold is a little higher. [...] *Sen tror jag faktiskt att tröskeln kanske är lite högre att skicka ett mejl eller att ringa upp på Skype och istället för att bara glida förbi ett rum och säga att jag har en fråga. Jag tror faktiskt tröskeln är lite högre.*

[...] we have Skype meetings every morning that lasts from 15 minutes to a half hour, [...] where we discuss what happens during the day, important meetings, reports that need to be done or problems that must be handled. [...] *så vi har Skypemöten varje morgon. Som är ungefär en kvart en till en halvtimme [...] och då går vi igenom vad som händer under dagen, viktiga möten som sker, rapporteringar som ska göras, eller krångel som man måste ta tag i.*

[...] so many opportunities have been created now for talking with each other and the dialogue has become more open in the morning meetings that we have in 15 minutes to see how everyone is doing. I think it has turned out very well, because everyone wants to share what they are doing and if something is wrong which contributes to the progress, I would say that it is the best meeting we have.

[...] så många möjligheter har skapats nu för att prata med varandra och dialogen har blivit mer öppen på morgonmötena som vi har på 15 minuter för att se hur alla har det. Jag tycker att det har visat sig mycket bra, för alla vill dela med sig av vad de gör och om något är fel som bidrar till framstegen, skulle jag säga att det är det bästa mötet vi har.

Beyond that we have a project meeting once a month, also digital. The whole group. Where we describe how the project is moving forward both in regard to time, technical and economical. So that everyone understands the status of the project.

Utöver det har vi ett projektmöte en gång i månaden, även digitalt. Hela gruppen. Där vi beskriver hur projektet går framåt både med avseende till tid, tekniskt och ekonomiskt. Så att alla är införstådda på projektets status.

You don't really know what's going on, so you must rely on these reports that you get everyday and have a list of questions that you ask in the Skype meetings.

Du vet inte riktigt vad som händer, så du måste lita på dessa avrapporteringar som du får varje dag och har en lista med frågor som du ställer i Skype-mötena.

You are not at all as efficient when you are at the office. You're constantly disturbed by people who come and go to talk or phones that ring or printers that don't work and so on. But those distractions don't exist at home. [...]

Du är inte alls lika effektiv när du är på kontoret. Du blir ständigt störd av människor som kommer och går för att prata eller telefoner som ringer eller skrivare som inte fungerar och så vidare. Men dessa distraktioner finns inte hemma. [...]

[...] We have a report system, where we send messages to each other about things that have occurred and so on. Here the messages are very formal and the answers too. Since we are not talking with each other as we used to, it has led to some misunderstanding, which is dependent on how they phrase their messages [...]

[...] Vi har ett underrättelsesystem där vi skickar meddelanden till varandra om saker som har hänt och så vidare. Här är meddelanden väldigt formella och svaren också. Eftersom vi inte pratar med varandra som tidigare, har det lett till missförstånd, vilket beror på hur man fraserar sina meddelanden [...]

[...] It is not as natural as sitting down and drinking a coffee and listening and then adding a comment when you have a thought, so it becomes much more formal I would say.

[...] Det är inte lika naturligt som att sitta ner och dricka en kaffe och lyssna och sedan lägga till en kommentar när man tänker, så det blir mycket mer formellt skulle jag säga.

[...] at the office, in the corridors, when having a fika, you talk to each other a lot more. Now you lose those interactions and it's up to each and everyone [...] to talk to each other and create those daily interactions.

[...] på kontoret, i korridorerna, när man har en fika, pratar man mycket mer med varandra. Nu förlorar du dessa interaktioner och det är upp till var och en [...] att prata med varandra och skapa de dagliga interaktionerna.

Sometimes no one participates at all, it's completely empty. But occasionally it's really fun at these meetings, although it's still difficult to replicate that feeling of [hanging out at the] cafeteria via a computer screen.

Ibland deltar ingen alls, det är helt tomt. Men ibland är det riktigt kul på dessa möten, även om det fortfarande är svårt att replikera den känslan av cafeteria via en datorskärm.

[...] Traditionally, on a workday without the pandemic you meet each other in the breakroom, in the corridors, you talk much much more with each other . You lose contact but it's up for each to participate in meetings and opportunities to talk with each other [...]. To get that everyday contact.

[...] Traditionellt, på en arbetsdag innan pandemin träffar du varandra i cafeterian, i korridorerna, pratar du mycket mycket mer med varandra. Du tappar kontakten men det är upp till var och en att delta i möten och ta möjligheterna att prata med varandra [...]. För att få den vardagliga kontakten.

[...] The one that receives the call wonders what the purpose is and not if one wants to talk for a while. You always have a purpose for calling someone [...]

[...] Den som tar emot samtalet undrar vad syftet är och inte om man bara vill prata om lite vad som helst ett tag. Det finns alltid ett syfte till att ringa någon [...]

I don't talk to everyone every day and you do that on a regular day in the office and I miss that. Sometimes it feels like you're losing your grip as a leader.

Jag pratar inte med alla varje dag som man gör på en vanlig dag på kontoret och jag saknar det. Ibland känns det som om du tappar greppet som ledare.

PM1, Team 1

You trust each other. And no one takes offense if you ask questions. That's how I feel.

Man litar på varann. Och det är ingen som tar illa upp om man ställer frågan heller. Det känner jag.

It's the same [as when working face-to-face]

.Det är likadant.

A question that takes 15 seconds used to take five minute instead so you have some time over now, but now when one asks a question over Skype, you keep working instead, no further discussion. It is often quiet.
En fråga som tar 15 sekunder brukade ta fem minuter istället så att du har lite mer tid nu, nu när man ställer en fråga via Skype fortsätter du att arbeta istället, ingen ytterligare diskussion sen. Det är ofta tyst.

It's been brought up during the morning meetings that there are very few of us who participate. We must get better at that, so that at least those of us who work from home and don't have a cafeteria to go to, connect.
Det har tagits upp under morgonmötena att det är väldigt få av oss som deltar. Vi måste bli bättre på det, så att åtminstone de av oss som arbetar hemifrån och inte har ett cafeteria att gå till, ansluter.

Thanks to Skype it is nearly unchanged, you can even initiate more contact than when you had 30 meters to another's office. Now you only turn on Skype.[...]

Tack vare Skype är det nästan oförändrat, du kan till och med initiera mer kontakt än när du hade 30 meter till en annans kontor. Nu slår du bara på Skype. [...]

[...] you take fewer breaks, you go on until lunch, from seven in the morning to 11 then you take lunch and keep going afterward. [...] There are advantages and downsides with it. You become more focused to complete your assignments and then take a break, instead of taking a break that hinders the assignment just to socialize with others. [...]

[...] du tar färre pauser, du fortsätter till lunch, från sju på morgonen till 11 så tar du lunch och fortsätter efteråt. [...] Det finns fördelar och nackdelar med det. Du blir mer fokuserad för att slutföra dina uppdrag och sedan ta en paus, istället för att ta en paus som hindrar uppgiften bara för att umgås med andra. [...]

[...] lots of distractions that occur when you're in the office. You get dragged into discussions that you shouldn't take part of. It's also easier to plan your day when you're working from home, with less distractions to take heed of.

[...] massor av distraktioner som uppstår när du är på kontoret. Du dras in i diskussioner som du inte borde vara med i. Det är också lättare att planera din dag när du arbetar hemifrån, med mindre distraktioner att ta hänsyn till.

You miss the social connections, but it's nothing that impacts how and what business decisions are being made.

Du saknar de sociala kontakterna, men det är inget som påverkar hur och vilka affärsbeslut som fattas.

It's easier and more natural to do so [socialize] at an office, when you have a face in front of you. That goes for a lot of things.

Det är lättare och mer naturligt att göra det på ett kontor när du har ett ansikte framför dig. Det gäller många saker.

PM2, Team 1

To get to know someone at a distance is difficult, especially for those that are new to the team.

Att lära känna någon på distans det är lite svårt, framförallt för dem som börjar som nya medarbetare och kollegor.

[...] it's results that matter. [...] If we must deliver something on Friday, that's what's important. [...] I don't always must know what everyone's doing.

[...] det är resultat som spelar roll. [...] Om vi måste leverera något på fredagen är det det som är viktigt. [...] Jag måste inte alltid veta vad alla gör.

[...] difficult when you get new colleagues who start during the pandemic. Getting to know someone at a distance is a bit difficult, especially for those who are starting out as new employees and colleagues. It's not easy to call and ask someone if you need help connecting to a system, it's not easy to call someone you don't know. It's easier if you are sitting in the office, in the same room. So it can be a little difficult to handle new employees, to ensure that they feel welcome, that they feel good at work.

[...] svårt när du får nya kollegor som börjar under pandemin. Att lära känna någon på avstånd är lite svårt, särskilt för dem som börjar som nyanställda och kollegor. Det är inte lätt att ringa och fråga någon om du behöver hjälp med att ansluta till ett system, det är inte lätt att ringa någon du inte känner. Det är lättare om du sitter på kontoret, i samma rum. Så det kan vara lite svårt att hantera nya medarbetare, se till att de känner sig välkomna, att de mår bra på jobbet.

I must admit that I'm very bad at participating in the fika-hangouts via Skype, but it has worked well for others.

But I'm really bad, if I see that it's 14:10 [the hangout already started], I'll just connect tomorrow instead. *Jag måste erkänna att jag är väldigt dålig på att delta i fika-hangouts via Skype, men det har fungerat bra för andra. Men jag är riktigt dålig. Om jag ser att klockan är 14:10 ansluter jag bara imorgon istället.*

[...] sometimes when you have Skype meetings but no one turns on the camera and you can't see each other, you lose that body language. Sometimes when I try to joke when we have a meeting where no one has a camera, I must sometimes explain that I'm only joking.

[...] ibland när du har Skype-möten men ingen slår på kameran och du inte kan se varandra förlorar du kroppsspråket. Ibland när jag försöker skämta när vi har ett möte där ingen har en kamera, måste jag ibland förklara att jag bara skojar.

If you're in the office it's not easy, if your colleagues go, do you want to get coffee? Then it's a bit harder to say no. But now I can choose whether to connect or not, and so it is pretty easy to just keep doing what you're doing. *Om du är på kontoret är det inte lätt, om dina kollegor går, vill du ha kaffe? Då är det lite svårare att säga nej. Men nu kan jag välja om jag vill ansluta eller inte, så det är ganska enkelt att bara fortsätta göra det du gör.*

So it feels like you're a bit more efficient at home, I must say. No one comes and disturbs unnecessarily, you call when you need to.

Så det känns som att du är lite mer effektiv hemma, måste jag säga. Ingen kommer och stör i onödan, du ringer när du behöver.

It has become a larger focus on working hours, I work at home, take some breaks, it becomes hard to do at home, you forget to take breaks. [...] At work you know that at nine and two o'clock there is a coffee break and then the microbreaks that occur when a colleague asks something. But at home you need to find your own routine and discipline and tell yourself when to quit. [...] Once you find a good routine and discipline it works well. *Det har blivit ett större fokus på arbetstid, jag jobbar hemma, tar några pauser, det blir svårt att göra hemma, man glömmer att ta pauser. [...] På jobbet vet du att klockan nio och två är det en kaffepaus och sedan minipauserna som uppstår när en kollega frågar något. Men hemma måste du hitta din egen rutin och disciplin och säga åt dig själv när du ska sluta. [...] När du väl har hittat en bra rutin och disciplin fungerar det bra.*

[...] at the office we brought lunch from home and ate together. We also had fika together. On those occasions we didn't talk about work, but about life, our partners, kids, or something else. But on Skype when you've booked a meeting for one hour, you stick to work-related topics.

[...] på kontoret tog vi med lunch hemifrån och åt tillsammans. Vi hade också fika tillsammans. Vid dessa tillfällen pratade vi inte om jobbet utan om livet, våra partners, barn eller något annat. Men på Skype när du har bokat ett möte i en timme håller du dig till arbetsrelaterade ämnen.

[...] it gets a bit difficult at home, you forget to take breaks. At the office you know, at 9 and at 14 it's time for coffee. And then those microbreaks when a colleague comes and asks you, but at home you must find your own routine and discipline.

[...] det blir lite svårt hemma, du glömmer att ta pauser. På kontoret vet du, klockan 9 och klockan 14 är det dags för kaffe. Och alla dessa minipausar när en kollega kommer och frågar dig, men hemma måste du hitta din egen rutin och disciplin.

It's something that must come from both sides [...] sometimes when you check Skype it's a bit difficult [to know] if someone is working, taking a break, or having coffee or a walk [...] I try to always have my phone on me, if someone sends me an email I try to answer as soon as possible, so faster than previously [when working in the office].

Det är något som måste komma från båda sidor [...] ibland när du kollar Skype är det lite svårt om någon arbetar, tar en paus eller dricker kaffe eller är ute och går [...] Jag försöker alltid ha min telefon på mig, om någon skickar ett mejl försöker jag svara så snart som möjligt, så snabbare än tidigare.

Team 2 - Releye

PL2, Team 2

[...] we've only interacted through Teams and it was a bit of a challenge in the beginning, especially because we didn't know each other and it's more difficult to connect [...] with new people and in big meetings.

[...] Vi har bara interagerat genom Teams och det var lite av en utmaning i början, särskilt för att vi inte kände varandra och det är svårare att skapa kontakt [...] med nya människor och i stora möten.

You also learn that you must be even more clear and have a very clear agenda. You must prepare your material very well. You can't improvise as much, you need a solid foundation for all that you do.

Du lär dig också att du måste vara ännu tydligare och ha en mycket tydlig agenda. Du måste förbereda ditt material mycket bra. Du kan inte improvisera så mycket, du behöver en solid grund för allt du gör.

As a project leader it always requires for me to have structure and know what needs to be done, but even more so now[...]

Som projektledare kräver det alltid att jag har struktur och vet vad som behöver göras, men ännu mer nu [...]

The challenges are especially tangible when it's newcomers [...] you don't really get an idea of what they're like [...] there are those who I've never seen because they never turn on their webcam [...] you make up what they look like, and then when you're completely wrong you're like, God, is that you? [...]

Utmaningarna är särskilt påtagliga när det är nykomlingar [...] du får inte riktigt en uppfattning om hur de är [...] det finns de som jag aldrig sett eftersom de aldrig slår på sin webbkamera [. ..] du skapar en bild av hur de ser ut, och när du har helt fel är det som, Gud, är det du? [...]

I think it's difficult, especially when we've had workshops, to get feedback from people, because it's easy when you're sitting at the same table. [...] you can look at people and read them, how they feel, to know if I must answer, but otherwise it's like this: it's completely silent, where are you, are you still there? Hello?

Jag tycker att det är svårt, särskilt när vi har haft workshops, att få feedback från människor, för det är lätt när du sitter vid samma bord. [...] du kan titta på människor och läsa av dem, hur de känner, för att veta om jag måste svara, men annars är det så här: det är helt tyst, var är du, är du fortfarande där? Hallå?

Everybody is so used to Teams that it is easier to take a quick meeting. It's not that we must connect to a video conference like back in the days, which felt like a project in itself. [...] it's much more effortless.

Alla är så vana vid Teams att det är lättare att ta ett snabbt möte. Det är inte så att vi måste ansluta till en videokonferens som förr i tiden, som kändes som ett projekt i sig. [...] det är mycket enklare.

For example [name redacted], I think I met him maybe once in real life. [...] I got to know him through Teams. He works with another customer three days a week, but two days a week he works with this customer that we work on together, and we don't talk all the time, but we chat a lot. It's been easy to get to know him virtually, so it's pretty cool that I feel like I know him.

Till exempel [name redacted, jag tror att jag träffade honom kanske en gång i verkligheten. [...] Jag lärde känna honom genom Teams. Han arbetar med en annan kund tre dagar i veckan, men två dagar i veckan arbetar han med den här kunden som vi jobbar med tillsammans, och vi pratar inte hela tiden, men vi pratar mycket. Det har varit lätt att lära känna honom virtuellt, så det är ganska coolt att jag känner att jag känner honom.

I'm probably more productive. Absolutely. I sit at home to work. I probably get more done than I should. *Jag är nog mer produktiv. Absolut. Jag sitter hemma för att arbeta. Jag får förmodligen mer gjort än jag borde.*

[...] I think that for my part, I probably work more because I have a difficult time taking breaks. I often eat in front of my computer [...] There are more natural breaks when working and people come by and ask something, you take a break. I think for better or worse you gain a lot of time [...]

[...] Jag tror att jag för min del förmodligen jobbar mer för att jag har svårt att ta pauser. Jag äter ofta framför min dator [...] Det finns mer naturliga pauser när jag arbetar och människor kommer förbi och frågar något, du tar en paus. Jag tror på gott och ont att du vinner mycket tid [...]

[...] sure, people can call or message me, but we ourselves can choose to deal with that by setting [our status] to
“Don’t disturb”

[...] visst, folk kan ringa eller skicka meddelanden till mig, men vi själva kan välja att hantera det genom att ställa till "Stör inte"

We have different types of meetings, like today we had project meetings. [...] It is here we prioritize what we are doing in the next sprint and basically what needs to be done in the project, how we are managing our budget and so on.

Vi har olika typer av möten, som idag hade vi projektmöten. [...] Det är här vi prioriterar vad vi gör i nästa sprint och i princip vad som behöver göras i projektet, hur vi hanterar vår budget och så vidare.

[...] You also learn that you must be even more clear and have a clear agenda. You need to have prepared the material, it is not possible to improvise as much since now you need proper grounds.

[...] Du lär dig också att du måste vara ännu tydligare och ha en tydlig agenda. Du måste ha förberett materialet, det är inte möjligt att improvisera så mycket eftersom du nu behöver ordentliga skäl.

PM3, Team 2

[...] you notice that people are more prone to disappear into the crowd when working virtually compared to a physical meeting. That must be actively dealt with, to try and include and involve people in another way.

[...] du märker att människor är mer benägna att försvinna i mängden när de arbetar virtuellt jämfört med ett fysiskt möte. Det måste hanteras aktivt, att försöka inkludera och involvera människor på ett annat sätt.

[...] a bigger step to contact someone to get help or to get input, that it's a slightly bigger step to get in touch with someone instead of sitting next to each other in the office where it's much easier to just say, can you look at this?. It's a higher threshold when you're dispersed.

[...] ett större steg för att kontakta någon för att få hjälp eller för att få input, att det är ett lite större steg för att komma i kontakt med någon istället för att sitta bredvid varandra på kontoret där det är mycket lättare att bara säga, kan tittar du på det här ?. Det är en högre tröskel när du är spridd.

[...] However the leadership in the project and in teams has changed. Because now you need to be more active, outreaching and actively question more than you needed before.

[...] Men ledarskapet i projektet och i team har förändrats. För nu måste du vara mer aktiv, uppsöka och aktivt fråga än du behövde tidigare.

[...] You lose the daily interactions [...] But the positive is that as long as you acknowledge it and be more active in talking to others, especially as a team leader and a project leader you need to be active and actually communicate with the people you work with.

[...] Du förlorar de dagliga interaktionerna [...] Men det positiva är att så länge du erkänner det och är mer aktiv i att prata med andra, särskilt som teamledare och projektledare, måste du vara aktiv och faktiskt kommunicera med de människor du arbetar med.

[...] It is more difficult to get everyone to speak when we have certain meetings. There is another dynamic when people are sitting behind a screen of course, so you must try to ask questions directly to people that do not naturally take the same space as in a physical meeting. So you must work with trying to include people in another way.

[...] Det är svårare att få alla att prata när vi har vissa möten. Det finns en annan dynamik när människor naturligtvis sitter bakom en skärm, så du måste försöka ställa frågor direkt till människor som inte naturligt tar samma utrymme som i ett fysiskt möte. Så du måste arbeta med att försöka inkludera människor på ett annat sätt.

It is probably easy to get in a situation when you work in your own space and once you're done, you tell them that you are done. But then if someone else has done something that maybe affects what you have done and that's a trap you don't want to fall into. So I try to prevent others from working in their own space and not communicating properly with each other.

Det är förmodligen lätt att hamna i en situation där du arbetar i ditt eget utrymme och när du är klar berättar du för dem att du är klar. Men då kanske någon annan har gjort något som kanske påverkar dig och ditt arbete, och det är en fälla du inte vill hamna i. Så jag försöker förhindra andra från att arbeta i sitt eget utrymme och inte kommunicera ordentligt med varandra.

I would probably say that it hasn't changed significantly [...] It's the same things that should be done, so to speak, even if it's under different circumstances [...] No, I can not say that my productivity has changed in any significant way.

Jag skulle nog säga att det inte har förändrats väsentligt [...] Det är samma saker som man bör göra, så att säga, även om det är under andra omständigheter [...] Nej, jag kan inte säga att min produktivitet har förändrats på något väsentligt sätt.

If you want to have lunch with somebody, a completely different set of demands are placed on you to actively seek them out.

Om du vill äta lunch med någon ställs en helt annan uppsättning krav på dig att aktivt söka efter dem.

[...] unfortunately in one way you lose some of the daily interactions. Such as talking at the coffee machine or talking when you [...] going for lunch and so on, which sets new demands to actively search for others.

[...] tyvärr på ett sätt förlorar du några av de dagliga interaktionerna. Som att prata vid kaffemaskinen eller prata när du [...] går till lunch och så vidare, vilket ställer nya krav på att aktivt söka efter andra.

In our projects we use [a tool] where you can keep track of how the development is going and which development points have been implemented [...] It will be an even more important tool now [...] that it's updated so that you know where you stand so that you can communicate with the customer.

I våra projekt använder vi ett där du kan hålla reda på hur utvecklingen går och vilka utvecklingspunkter som har implementerats [...] Det blir ett ännu viktigare verktyg nu [...] att det uppdateras så att du vet var du står så att du kan kommunicera med kunden.

[...] the only habit that I think I have developed is just to try to more frequently contact people who are involved in my projects, but also those who report to me. So that they feel that I'm actually there for them [...] I have previously had managers who have not been so present either physically or digitally and that's nothing to recommend. You sort of find a routine to, well, be 'there' for the employees.

[...] den enda vana som jag tror att jag har utvecklat är bara att försöka oftare kontakta personer som är involverade i mina projekt, men också de som rapporterar till mig. Så att de känner att jag faktiskt är där för dem [...] Jag har tidigare haft chefer som inte har varit så närvarande vare sig fysiskt eller digitalt och det är inget att rekommendera. Du hittar typ av en rutin för att, ja, vara där för de anställda.

We're already used to them [digital tools], so there's not been that much change, it's more the human encounters that have become digital.

Vi är redan vana vid dem, så det har inte skett så mycket förändring, det är mer de mänskliga mötena som har blivit digitala.

PM4, Team 2

[...] it might be a bit difficult I think, for people who are new might not want to interrupt the boss with a question. Because you don't bump into each other as you do in a physical workplace, it might be a bit more difficult if you are less senior to take the opportunity to ask.

[...] det kan vara lite svårt tror jag, för människor som är nya kanske inte vill störa chefen med en fråga. Eftersom man inte stöter på varandra som på en fysisk arbetsplats kan det vara lite svårare om man är mindre senior att ta tillfället i akt.

[...] from my own point of view, there's no difference. I've been with so many of them for so long [...] I can almost picture how they're sitting and working from home. - PM4, Team 2

[...] ur min egen synvinkel är det ingen skillnad. Jag har varit med så många av dem så länge [...] Jag kan nästan föreställa mig hur de sitter och arbetar hemifrån.

But I also think that the leadership has been good [...] coming out with regular weekly emails or such where we discuss how it's going and what people are doing.

Men jag tror också att ledarskapet har varit bra [...] med regelbundna veckovisa e-postmeddelanden eller liknande där vi diskuterar hur det går och vad folk gör.

I think that there really hasn't been such a big difference in terms of results [...] the end result has been about the same and just as good, I think in any case.

Jag tror att det verkligen inte har varit så stor skillnad när det gäller resultat [...] slutresultatet har varit ungefär detsamma och lika bra, tror jag i alla fall.

[...] one negative aspect that I have experienced is that you are never free from work if you don't actively decide that you are not going to do more. I have realised that because of that I work a lot in the evening since it is quiet and there is no one that contacts me. I tend to work then so I have definitely worked more during the pandemic, while it at the same time has been easier to do so. It's a special situation. Maybe a bit harder to hold back?

[...] en negativ aspekt som jag har upplevt är att du aldrig är fri från jobbet om du inte aktivt bestämmer att du inte ska göra mer. Jag har insett att därför jobbar jag mycket på kvällen eftersom det är tyst och det finns ingen som kontakter mig. Jag brukar jobba då så jag har definitivt arbetat mer under pandemin, samtidigt som det har varit lättare att göra det samtidigt. Det är en speciell situation. Kanske lite svårare att hålla tillbaka?

[...] When you are at the office working, you don't bring your work computer when you are going home, which means that I can't work from home [...]

[...] När du arbetar på kontoret tar du inte med dig din arbetsdator när du ska hem, vilket innebär att jag inte kan arbeta hemifrån [...]

[...] we have been pretty good at doing our Dailys in the mornings so that everyone knows what I'm doing, if there are any issues, any questions and what needs to be done today [...]

[...] vi har varit ganska bra på att göra våra Dailys på morgonen så att alla vet vad jag gör, om det finns några problem, några frågor och vad som behöver göras idag [...]

[...] I have tried to be extra clear so that there will not be any misunderstandings.[...]

[...] Jag har försökt vara extra tydlig så att det inte blir några missförstånd. [...]

I've been pretty bad at defining when I was done, and so were my colleagues. I noticed there were people writing to each other in the evening, because someone's working and then sends a message hoping you'll answer, and I can see that and feel like yeah, I probably want to answer because I understand that that person needs help. [...] for the past half year I've really tried to make an effort to not work in the evenings as much, so now I'm feeling better.

Jag har varit ganska dålig att definiera när jag är klar, och det var mina kollegor också. Jag märkte att det fanns människor som skrev till varandra på kvällen, för att någon arbetar och sedan skickar ett meddelande i

hopp om att du kommer att svara, och jag kan se det och känna mig som ja, jag vill nog svara eftersom jag förstår att personen behöver hjälp . [...] det senaste halvåret har jag verkligen försökt anstränga mig för att inte arbeta på kvällarna lika mycket, så nu mår jag bättre.

[...] no one disturbs me and I can delve into my work and work with a great focus, and I won't come out of it until my next task and then I just jump into that one.
[...] ingen stör mig och jag kan fokusera på mitt arbete och arbeta med stort fokus, och jag kommer inte ut ur det förrän nästa uppgift och sedan hoppar jag bara in i den.

I miss the human interactions a lot. I think many do. But to be frank, for my own part the job in itself is more easily performed.
Jag saknar de mänskliga interaktionerna mycket. Jag tror att många gör det. Men för att vara uppriktig, för min egen del så är jobbet i sig lättare.

[...] I think that we lost a lot of this casual talk, it is definitely less of it, but it has grown over time which has led to us sometimes connecting to meetings earlier, to talk about something besides the meeting itself.
[...] Jag tror att vi har förlorat mycket av de här avslappnade samtalen, det är definitivt mindre av det, men det har vuxit fram över tid vilket har lett till att vi ibland har anslutit oss till möten tidigare, för att prata om något förutom själva mötet.

I've had to get a bit better at doing tasks that might've been handled by someone else, for example booking meetings.
Jag har fått bli lite bättre på att göra uppgifter som kanske har hanterats av någon annan, till exempel att boka möten.

Normally we work with the project on Thursdays and Fridays. Every Thursday we start with a *Daily*, which we call them, where we have a briefing that can take up from half an hour to one hour and 30 minutes, where we discuss what needs to be done and if we have any plans to execute this or we have issues that need to be solved
[...]

Normalt arbetar vi med projektet på torsdagar och fredagar. Varje torsdag börjar vi med en Daily, som vi kallar dem, där vi har en genomgång som kan ta upp från en halvtimme till en timme och 30 minuter, där vi diskuterar vad som behöver göras och om vi har några planer som ska genomföras eller problem som måste lösas [...]

[...] It is something about not being able to see people when you are video chatting, especially people you don't know so well [...] Those at my organization I know pretty well and can recognize by their voice, when they say something, what they mean and what they feel. But when you can't see people you don't know it can become tricky [...]

[...] Det handlar om att inte kunna se människor när du videochattar, särskilt människor som du inte känner så bra [...] De på min organisation känner jag ganska bra och kan känna igen dem på deras röst, när de säger

*något, vad de menar och vad de känner. Men när du inte kan se människor som du inte känner kan det bli svårt
[...]*

Team 3 - Lumera

PL3, Team 3

I think that the lines [of work versus personal life] have blurred a bit, some log in for a quick check-in before breakfast, or some sit alone in the evening. So I think the workday has almost dissolved a bit, and that's both good and bad, that you can get answers to things very late in the evening. There's no expectation that you will work normal working hours, because the computer is always there and you live with it.

Tro att det liksom flutit ut lite, vissa loggar in och kolla lite snabbare nu innan man käkar frukost eller några sitter ensam på kvällen så tycker arbetsdagar har blivit lite mer upplösta lite längre så där och det är väl på gott och ont och att man kan få svar på saker väldigt sent. Det finns ingen förväntan att man ska liksom jobba normal arbetstid, eftersom datorn står här och man lever med den.

It's not my strongest side, this 'cute stuff'. [...] organized quizzes, fun activities or fika, we've not had much of those at all. I think that it can become artificial. - PL3, Team 3

Inte min starkaste sida, de här gulligullet, vi har haft några mindre AW o så där och på Dailys ibland, då är det inte stenhård strikt agenda heller. Där kan de bli lite informellt och informellt tja snack. Lite sån ventil, typ 5 minuter går åt att prata strunt på de mötena. Men organiserat med frågesport eller rolig grej eller små fika, det har vi inte kört mycket alls. Jag tycker själv, jag tycker det kan bli konstlat. Vi har haft internt med [customer name] och man sitter och käkar chips och låtsas dricker en öl, haha. Vet inte. Sitter i barnens rum ju haha.

From the beginning we met much more informally and then it was enough with a weekly meeting [...] Then we started with daily meetings instead.

[...] jag skulle säga att från början hade vi ju på plats och då sågs vi ju mycket informellt och då räckte det med ett veckomöte när vi liksom verkligen gick in i ett rum då hela gänget och satt gick igenom vad som var aktuellt och vad som behövde tryckas på eller ifall något eskalerade någonstans. Men det tappade vi ju helt då. Då införde vi dagliga möten så körde vi faktiskt måndag till fredag, varje eftermiddag så här halvtimmes möten.

You can do these ad-hoc things face-to-face [by video] even if you're not collated. It has actually become easier to keep in touch with more people at the same time. You used to run around the offices, be at meetings, out with the client. You almost had a worse track of things. The interaction with the project group has become more frequent. [...] It's easier to set up meetings now than in the past. Previously, many were away whole days with the client and the rest of us were here, and then you didn't see each other.

[...] ja hänger ihop lite med att man kan ta de här ad-hoc grejerna face to face även fast man är på olika ställen. Det har blivit lite lättare faktiskt att hålla kontakten med flera samtidigt för som sagt. Man sprang omkring både på kontoren, de va möten kors & tvärs. Man va hos kund mycket. Man hade nästan sämre koll. Interaktionen med projektteamet har blivit tätare. [...] Det blir bara lättare att få till mötena nu för nu, än förr. För förr var det en del att hela dagen borta hos [customer name] och vi satt och har möten, då sågs man inte.

No one calls to ask if you caught the game last night, like you would've at the office. You know they have a purpose for contacting you.[...]
Exakt, det är ingen som ringer liksom för att snacka "om såg du matchen igår", lite som man kanske på kontoret kan ha gjort så bara för en stund. Då förstår man att det är någonting.[...]

PM5, Team 3

[...] There I think it was quite difficult for them to have their colleagues through the web [...] During the days I was at the office I noticed that they asked a lot more questions [...] which might not be so weird since they are new and don't know people [...]
[...] Där tror att det kanske var lite tufft för dom i början att att ha sina kolleger. Via nätet alltså och det tycker jag märkte lite de dagar jag var inne. Då fick ju mycket mer frågor från dem, men de dagar satt hemma. Det kändes inte lika naturligt för dem att ta kontakt med mig via teams då och det kanske inte så konstigt när man är ny och inte känner folk.

[...] I would say that I work as good as I would in the office. Some things are easier in the office. The big benefit is the reduced travel time [...]
[...] jag tycker nog att jag jobbar lika bra på kontoret. Jag tycker vissa grejer är liksom enklare på kontoret. Det är väl den stora vinsten tycker jag det är att slippa restiden.[...]

[...] work is always close by when the computer is in a room a stair above, so it is easy to slip back into work for a while after dinner instead of relaxing in the couch.
[...]Man har väldigt nära till jobbet men där datorn står i ett rum, en trappa upp på huset så det är. Lätt hänt att man, liksom smiter tillbaka till datorn en liten stund efter middagen på kvällen istället för att koppla av i soffan.

[...] When you are in the office, you can hear what others around you are talking about. [...] then you can interject and tell them, that is something I know about, it is about this and this.
[...] Men sen när man sitter i ett landskap så är det på något vis man hör ju lite liksom vad folk runt omkring er pratar om. Det gör man ju inte när man sitter så här utan antingen är man med i samtalet eller också men inte det. Jag sitter man i ett kontorslandskap så kan man ju höra. Två andra pratar om någonting och sen så kan man bryta in och så ja jo, men det där känner jag till. Det handlar om det och det.

It has worked great until there are too many participants then it becomes difficult. It is easy for people to talk over each other [...] not as naturally as when you are in the same room together.[...]

Ja, jag tycker det fungerar bra till en viss gräns blir man för många då då tycker jag då då är det svårt. Det blir lätt att folk pratar i munnen på varandra och det finns det för sig de här funktionerna att man kan räcka upp handen. Men det blir inte riktigt lika naturligt som när man sitter i ett rummet tillsammans. [...]

[...] in some way there is a slightly larger step to ask for help when you are calling them on Teams compared to when they are sitting close by and you can see if they are busy or not. Then you can ask them directly, now you hope that they will answer and have time to help you.

[...] Det är lite på något vis lite större steg och frågan om hjälp när man ska ringa upp dem på team sen om de hittar 2 skrivbord borta man bara kan liksom då kan man ju kika lite så där och se verkar. Verkar den här personen detaljen eller inte och ser man att de är lediga? Så kan man ju fråga direkt, här får man ju chansar och ringa upp och hoppas att de har tid att hjälpa till.

PM6, Team 3

We've made attempts to hang out and have "after-work's", I participated once, but I think it's useless. Some people seem to like it, but I think it's like, you can't create that one-on-one contact that you get at face-to-face workshops or after-work's, because there you might end up on the couch next to someone you don't know. [...]

I'd rather go down and talk to the neighbor.

Vi har gjort försök att ha after work och grejer, jag var med på halft sånt och sen tycker jag det där, det är värdelöst. Vissa verkar gilla det, men jag tycker det är liksom, det går ju inte skapa den där en-en kontakten som man gör på workshoppar, eller på afterworks ändå för då hamnar man i soffan bredvid någon som man inte känner. [...] Går hellre ner och prata med grannen, haha.

I'm more productive because there's less idle time [...] it feels like you get more hours out of a day but still don't work more. Maybe I even get 30 or 45 minutes of more work done, but still have more free time.

Ja blir mer produktiv så för att man, blir mindre ställt tid [...]. För mig så känns det, man får ut så mycket mer timmar av en dag fast jag inte jobbar mindre. Men det kanske till och med är så att jag jobbar en 30 minuter, 45 minuter längre varje dag, men det är ändå mer fritid.

[...] now you have weekly meetings and you go through what happened since last time [...] But it becomes increasingly important when you don't see each other and can't talk to each other. Then follow-up becomes somewhat more important.

[...] ha kanske veckovisa träffar och man går igenom vad som hänt sen förra gången och det hade man ju också innan. Men det blir allt viktigare när man inte ser varandra och kan prata med de. Då blir uppföljning på något sätt lite viktigare.

[...] there's the spontaneity with seeing how things go. It's sad not to see. I can't see [name redacted] sitting there and spontaneously see how it goes, I actually must find a time in my calendar and see, yes, we're both available

at 15:30. I only need 5 minutes, so then it may feel unnecessary that I must book a time instead of just asking a question, like you could before. [...]

[...] med det spontana hur man ser att saken går. Det är tråkigt att inte se. Jag kan inte se att [name redacted] sitter där borta och spontant se hur det går, utan jag måste faktiskt hitta en tid i min kalender och säga att ja, men vi kan klockan 15:30 båda två. För jag behöver bara 5 minuter så då kan det kännas onödigt att jag måste liksom boka in där istället för att bara ställa en fråga som man kunde göra förut. [...]