



SCHOOL OF  
ECONOMICS AND  
MANAGEMENT

# **Actions Managers Should Take to Build a High-Performing Virtual Team**

How effective communication, trust, team cohesion, and structure can  
contribute to develop high-performing virtual teams

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**Abstract**

The technological field can be seen as a huge advance for mankind before it emerged employers had to hire experts located in the same geographical area as the company. This changed with the introduction of information and communication technologies. Because of this, the labor market was able to become more global, meaning that employers do not need to hire employees who are physically close to them. Virtuality can be argued to be a great advantage, but for it to be an advantage it is important to understand what managers can do to help their virtual teams become high-performing virtual teams.

The aim of this study was therefore to identify actions that managers can take to build high-performing virtual teams. In order to explore what managers can do to help their Virtual teams become high performers, four key concepts were identified, namely effective communication, trust, team cohesion, and structure. In order to fulfill the purpose, a qualitative research method was used. To collect empirical data, structured interviews were conducted with 13 employees of virtual teams. The data were then analyzed using thematic analysis which generated 5 head themes and 12 sub-themes.

The result showed that structure and effective communication most likely function as enablers to develop trust and team cohesion in virtual teams. Furthermore, this study concluded that virtual teams might not be as different as face-to-face teams with regard to the actions that can be taken to develop into a high-performing team. This could be due to today's information and communication technologies which allow teams to exploit both the verbal and non-verbal communication channels.

**Keywords:** *Management, High-performing, Virtual Teams, Effective Communication, Trust, Team cohesion, Structure, Information, and Communication Technologies*

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## Table Of Content

<b>Abstract</b>	<b>1</b>
<b>Acknowledgement</b>	<b>2</b>
<b>Table Of Content</b>	<b>3</b>
<b>List Of Tables</b>	<b>5</b>
<b>1. Introduction</b>	<b>6</b>
1.2 Problem Statement and Contribution of the Thesis	8
1.3 Research Purpose and Research Questions	9
1.3.1 Method	10
1.4 Delimitations	10
1.5 Outline of the Thesis	10
1.6 Definitions of Key Concepts	
The definition of each key concept can be found in the table below.	11
<b>2. Literature Review</b>	<b>13</b>
2.1 Virtual Work and Virtual Teams	13
2.2 Effective Communication	14
2.3 Trust	17
2.4 Team Cohesion	19
2.5 Structure	21
2.6 Effective Communication, Trust, Team Cohesion, and Structure in Virtual Teams	22
<b>3. Experts Interviews</b>	<b>25</b>
3.1 Methodology of Experts	25
3.1.1 Definition of an Expert	25
3.1.2 Participants	25
3.1.3 Data Collection	26
3.2 Insights from Experts Interviews	26
<b>4. Methodology</b>	<b>28</b>
4.1 Research Approach and Design	28
4.2. Literature Review	29
4.3 Participants	29
4.4 Data collection	31
4.5 Data Analysis	32
4.6 Reflexivity, Credibility, and Transferability	33
4.7 Research Ethics	34
<b>5. Result</b>	<b>35</b>
5.1 Effective Communication	35
5.1.1 Transmitting the purpose of a message	35
5.1.2 Use of different communication technologies	36
5.1.3 Utilize the various functions of ICT tools	37
5.1.4 Information and knowledge sharing	38

5.2 Trust	38
5.2.1 Reliability	39
5.2.2 Personal relationships	40
5.2.3 Mutual trust	40
5.3 Team cohesion	41
5.3.1 Team objectives and goals	41
5.3.2 Collaboration	42
5.4 Structure	43
5.4.1 Standardized work processes	43
5.4.2 Define team roles and tasks	43
5.4.3 Supportive structure	44
5.5 Connection between effective communication, trust, team cohesion, and structure	45
<b>6. Discussion</b>	<b>47</b>
6.1 Effective communication	47
6.2 Structure	50
6.3 Trust	52
6.4 Team cohesion	55
6.6 Actions to take in order to help VTs become high-performing	56
6.7 Research Limitation	60
<b>7. Conclusion</b>	<b>62</b>
7.2 Further research	64
<b>References</b>	<b>66</b>
<b>Appendix</b>	
Appendix A: Form To Participants To Sign Up To The Study	<b>76</b>
Appendix B: Interview Guide For Participants	77
Appendix C: Mail To The Experts	78
Appendix D: Interview Guide For The Experts	79

## **List Of Tables**

*Table 1: Definitions of Key Concepts*

*Table 2: Overview of experts that participated*

*Table 3: Demographics of Participants*

*Table 4: Head themes, sub-themes and meaningful entities found from the thematic analysis*

## 1. Introduction

The mid-twentieth century marks a change in the nature of work. According to Oldman and Hackman (2010), work has become more cognitively demanding and complex, the organizations are becoming more diverse, and workplaces are becoming more flexible. It can be argued that the increasing complexity of work tasks requires teamwork and cross-functional teams within the organization. It has been shown that high-performing teams have an advantage over individuals since each team member offers unique ideas and insights. Moreover, team members with different specializations, seniority levels, and work experience can complement each other's skills (Katzenbach & Smith, 2015). Katzenbach and Smith (2015) define high-performing teams as a group of goal-focused individuals who collaborate to achieve company goals. Therefore, profit organizations depend highly on their employees and high-performing teams as they are vital to making a profit by achieving the company's goals (Katzenbach & Smith, 2015).

Another complexity that has been identified is the development of the labor market. This means that the labor market extended from a local market into a global market. Atkinson (1984); Towers, Duxbury, Higgins, and Thomas (2006); Alvin, Ronsson, Hagström, Johansson, and Lundberg (2011) describe the shift as follows: Before the technology era, employers had to hire experts that were placed in the same geographical area as the company. This changed when Information and communication technologies (ICT) were established. The ICT triggered a paradigm shift regarding the labor market and has transformed the way of working. Before the world wide web and internet were founded in the 1980s, work was done locally. If collaborations were done by people not located in the same area, the communication lead time was tremendously long, or traveling was needed (Atkinson 1984, Towers et al., 2006, Allvin et al., 2011). Due to technology such as laptops and mobile phones, remote work is possible. On one hand, this has enabled both more flexibility for the employees since they can now work virtually, as well as for the organizations that can have people working around the globe (Atkinson 1984, Towers et al., 2006, Allvin et al., 2011). On the other side, organizations can now focus on recruiting the best talent for a position without being limited by the person's geographical location. Since the employees do not have to be physically together to perform their work, virtual teams (VTs) can be created (Berntson, Näswall & Sverke, 2008).

As mentioned, the possibility to work virtually brings advantages both for the organizations as well as employees. Nevertheless, it is essential to mention that virtuality impacts how teams work together (Powell, Piccoli & Ives, 2004). A lack of regular face-to-face (FtF) interaction, working across different time zones, and ICT when communicating has been shown to impact the performance of virtual teams (Powell, Piccoli & Ives, 2004). Existing research continuously mentions three crucial concepts to building high-performing teams, namely **effective communication**, **trust**, and **team cohesion**, while simultaneously emphasizing that virtual teams face significant difficulty in developing them (Alexander, 2000; Kezsbom, 2000; Lipnack & Stamps, 2000; Solomon, 2001). Furthermore, studies investigating all three concepts show that each concept is crucial for developing a high-performing team. However, it has also been shown that all three concepts are highly interconnected (this will be further elaborated on in *section 2.6*) (Lin, Standing & Liu, 2008; Garro-Abarca, Palos-Sanchez & Aguayo-Camacho, 2021). A recent study by Tan, Ramayah, Ai Ping Teoh, and Cheah (2019) examined various concepts that have an impact on team performance, these were communication, coordination, cohesion, relationship building, reward, and trust. The results showed that communication, cohesion, relationship building, and trust were all positively related to team performance with a significance level below  $p < 0.05$ . Because of the studies mentioned above, it was decided that the three concepts of communication, cohesion, and trust would be further investigated in this study. In this study, the authors will refer to the concepts as; effective communication, trust, and team cohesion.

Effective communication is crucial for VTs and their performance since it helps teams stay aligned regarding their work and shared goals (Cartwright, 1968). Furthermore, it also helps the team to coordinate tasks and collaborate, as well as build a relationship and reduce the feelings of anonymity (Varhelahti & Turnquist, 2021; Owens & Khazanchi, 2018; Morgan, Paucar-Caceres & Wright, 2014). For a team to have trust is a critical concept to be successful (Grosse, 2002) because virtual teams face uncertainty and have incomplete knowledge of all group members (Child, 2001). This implies that trust is crucial for a VT and builds the foundation for a team to work successfully (Child, 2001). Members of VTs who perceive team cohesion see the team as a unit. They feel more responsible for the tasks and goals of the company. In return, this fosters collaboration and minimizes conflicts (De Wit, Geer & Jehn, 2012). Studies that were conducted identified that the three concepts are connected. A study by Powell, Piccoli, and Ives (2004) found that a high level of



communication among team members of a VT strengthens trust and team cohesion. Another study by Gaan (2012) found a reciprocal relationship between trust and team cohesion. Thus, improvement in trust between team members leads to increased perceived team cohesion (Gaan, 2012).

As mentioned before, existing research indicates that establishing effective communication and building trust and team cohesion meet specific challenges in a virtual work context. Communicating through ICT can be challenging since the technological tools can limit the richness of the communication (Lin, Standing & Liu, 2008). Furthermore, the lack of non-verbal communication cues and a lack of spontaneous FtF interactions have made it more difficult for VTs to build trusted relationships with one another (Varhelahti & Turnquist, 2021; & Horwitz et al., 2006). Research conducted by Warkentin, Sayeed & Hightower (1997) found that collaborative technologies hindered VT teams from developing team cohesion.

In order to overcome the mentioned challenges and build a high-performing VT, managers are vital (Cascio & Shurygailo, 2003). Zander, Mockaitis & Butler (2012) describe managers in a virtual setting as bridge makers, blenders, and boundary spanners. Thus, managers play an essential part in how a VT works, mainly because they can influence team development, which impacts how a team deals with obstacles and how the team adapts to such challenges (Baard, Rench & Kozlowski, 2014). In order to do so, they need to acquire specific skills and behaviors to support their team, build relationships among the distributed colleagues, coordinate tasks and facilitate team processes (Bell & Kozlowski, 2002). Furthermore, as relationship building in a VT is not as organic and natural as in FtF teams, it is argued that the new technologically mediated working settings require managers to take new approaches to develop a high-performing team (Nunamaker, Reinig & Brigg, 2009)

## **1.2 Problem Statement and Contribution of the Thesis**

This thesis focuses on high-performing VTs by studying the three concepts, effective communication, trust, and team cohesion. As mentioned before (see *section 1.1*), specific challenges regarding the three concepts in VTs were identified. Establishing the concepts in a VT is more challenging because team members rely solely on technological mediated tools to communicate. It was also discussed that a manager plays an essential role in developing VT. Furthermore, the authors believe that due to the role the three concepts play in building a

high-performing team, managers must acknowledge the importance of establishing them. Furthermore, managers need to find new approaches to develop high-performing teams.

Soomar (2020) emphasized that the concepts have been studied mainly from an organizational and structural point of view. On the one hand, managers must ensure that institutions, such as routines and technology infrastructure are in place. On the other hand, the company should implement policies and procedures employees can rely on (Soomar, 2020). Nevertheless, little research has focused on developing activities hands-on practices for managers to build high-performing VTs by enabling effective communication, trust, and team cohesion.

This study identified the need to develop actions that managers can take to build high-performing VTs. The study will focus on employees' insights and experiences to develop actions that can enable effective communication, and create trust and team cohesion. The authors believe that employees are the source of knowledge that can add to the existing literature by explaining what they need to develop effective communication, trust, and team cohesion and therefore be able to perform in their work.

By providing managers with actions on how to establish effective communication, and build trust and team cohesion, the aim is to mitigate the risk of not maximizing the potential of a team and hindering it from becoming high-performing. Suppose a team can utilize its capacities and is motivated. In that case, it is more likely to deliver on the team steams goals and the overarching organizational goals and thus contribute to a company's success and profit (Smith & Katzenbach, 2015).

### **1.3 Research Purpose and Research Questions**

The purpose of this study is to develop actions for managers to take in order to build high-performing VTs. Thereby, the focus is on three crucial concepts for a team to be high-performing: effective communication, trust, team cohesion. The identified purpose has led to the following research question

- *What actions should a manager implement to build high-performing teams in a virtual setting?*

#### **1.3.1 Method**

In order to answer the research question, a literature review was conducted. In addition, interviews with experts (for a definition, see *section 3.1.1* ) were conducted in order to gain

insights into the three concepts and how they are related to building a high-performing VT in practice. All experts emphasized the importance of enabling effective communication, building trust, and team cohesion in VTs. Furthermore, they all mentioned a fourth concept that is important for building a high-performing VT, namely **structure**. Since developing a structure as mentioned by all experts is essential it was added as a fourth concept to this study. Thus, structure was included in the literature review (see *section 2.5*) and in the employees' interview questionnaire. A more detailed explanation of the author's decision to include structure can be found in *section 3.2*.

#### **1.4 Delimitations**

Before going further, the delimitations of this study will be discussed. Firstly, the focus is on VTs. VTs usually are geographically distributed, work across time zones, work towards shared goals, and work interdependently to achieve their objectives (Cohen & Bailey, 1997). VTs also rely heavily on ICT to communicate and collaborate. (Bell & Kozlowski, 2002; Lipnack & Stamps, 1997). For this study, the following selection criteria were established: participants had to be members of a VT and had colleagues geographically distributed that they do not meet more often than four times a year. The participants did not have the title "manager" since this study aims to contribute to the existing literature by understanding what employees need to become high-performing. Furthermore, they are not being provided with a physical workspace from the employer. Multiple concepts are identified with becoming a high-performing team (Lin, Standing & Liu, 2008). However, this study focused on effective communication, trust, team cohesion, and structure. It is essential to be aware that there is a connection between those four concepts as possible developed actions could have an impact on multiple concepts simultaneously. Thus, the connection between the concepts will be considered throughout the study. However, to ensure that all concepts are looked at with the same attention, they will be investigated as individual concepts during the literature review and the data collection.

#### **1.5 Outline of the Thesis**

This master thesis is structured as follows. The 1. chapter outlines the introduction to the topic, the research questions, and the purpose. It also includes the problem statement and contribution of this thesis. The 2. chapter presents a literature review on VTs, effective communication, trust, team cohesion, and structure. The literature review intends to provide

the reader with relevant information and a good understanding of the existing literature on the research topic. In addition to existing literature, chapter 3 evaluates interviews conducted with experts and provides a theoretical framework that will serve as a basis for developing the interview questionnaire for employees. Chapter 4 describes the research methodology and the methods that have been utilized to conduct the research. It presents the research approach of the study, the research design, and the strategy of data collection. Further, the chapter outlines the process and choices that have been made regarding sampling method, data collection, data analysis, research reliability, validity, and limitations of the research. In chapter 5, the results of the qualitative study are presented. Chapter 6 continues to analyze and discuss the research findings with the existing literature and the knowledge gained from expert interviews. Chapter 7 concludes the thesis and practical and theoretical implications for the future.

### 1.6 Definitions of Key Concepts

The definition of each key concept can be found in the table below.

Key Concept Definition	Definition
Virtual Team (VT)	For this study, the authors defined VTs as teams whose members are geographically distributed and working toward a common goal, primarily using ICT to communicate but also having some physical interactions throughout the year (no more than three times per year).
Effective communication	Effective communication in this study refers to both task-oriented communication meaning that you communicate to be able to perform a task. Social-oriented communication refers to communication that helps to build relationships, team cohesion, and trust (Lin, Standing & Liu, 2018)
Trust	Trust represents the extent to which one team member (i.e. trustor) can rely on a colleague (i.e. trustee) to perform a certain task important to the trustor without being able to monitor or control the behavior (Mayer, Davis & Schoorman, 1995).

Team Cohesion	Team cohesion refers to the extent to which individuals are attracted to one another and committed to performing the group's task (Paul, Drake & Liang, 2016).
Structure	This study will identify structure, as the development and maintenance of norms, roles, and interaction patterns in a team (Korsgaard, Picot, Wigand, Welbe & Assmann, 2010)
High-Performing Teams	High-performing teams can be defined as a group of goal-focused individuals that collaborate in order to achieve shared goals. The team consists of members with different specialized excellence and complementary skills (Smith & Katzenbach, 2015).

*Table 1: Definitions of Key Concepts*

## 2. Literature Review

### 2.1 Virtual Work and Virtual Teams

Virtual work, or virtual organizations as it is also called, is defined as work that consists of teams and employees that work apart but towards a collective goal, with the use of ICT as an intermediary for collaboration (Vartiainen, 2006). VTs can be defined as a collection of employees that are geographically distributed, work overtime zones, long-distance, and within other organizational boundaries (Bell & Kozlowski, 2002; Lipnack & Stamps, 1997).

Communication within VT can be synchronous (In-real-time) and asynchronous (not In-real-time). Research has shown that in a virtual work environment, teams predominantly communicate asynchronously due to employees working across time zones (Kayworth & Leidner, 2000), and therefore "real-time" interactions are limited (Bell & Kozlowski, 2002). Furthermore, Bell and Kozolowski (2002) stress that it is not the use of technology that defines a VT but rather the absence of face-to-face interaction.

Furthermore (Guinalíu & Jordán, 2016) state that virtual work and teams provide companies with greater adaptability, which allows them to handle new market requirements. Virtual work comes with many advantages for both companies and employees. A company can recruit the best available talent regardless of its geographical position (Townsend, DeMarie & Hendrickson, 1998). Thus, the team can be composed of the most talented employees regardless of their physical position. Most likely, this will result in a highly diverse VT. In this context, diversity refers to different cultural backgrounds, skills, and knowledge (Andriessen & Vartiainen, 2006). Diversity in a team can increase the quality of work and decision-making, and problem-solving (Hunt, Layton & Prince, 2015; Lipnack & Stamps, 1999; Townsend, DeMarie & Hendrickson, 1998). These benefits do not come without challenges, as cultural differences, language barriers, and different work backgrounds carry a greater risk of misunderstandings and conflicts (Chudoba, Wynn & Watson-Manheim, 2005; Hunt & Prince, 2015). The virtual setting also brings advantages for employees. Employees are provided with a more extensive selection of companies they can choose to work for since they are not tied to a specific location and office space (Townsend, DeMarie & Hendrickson, 1998). Furthermore, employees can choose where they want to work, which provides them with more flexibility (Hertel, Geister & Konradt, 2005).

Despite the advantages a virtual workspace offers to employees and organizations, it also comes with challenges. Research has shown that collaborating on collective tasks can be challenging since VTs rely solely on ICT for communication. Additionally, the complexity of the context (e.g., working across time zones, different cultural backgrounds, and language barriers) can put even more strain on collaboration (Andriessen & Vartiainen, 2006).

Additionally, the clarity of shared goals and assignments, colleagues' roles, accountability, and responsibility when participating in a VT can be unfortunately vague. Therefore, it is in the manager's interest to understand the challenges mentioned and develop a support structure to help the team overcome them to perform at their best (Andriessen & Vartiainen, 2006). Supportive structures can be seen as routines, cohesive work processes, and availability of ICT to support communication and guidelines on using them to share information (Andriessen & Vartiainen, 2006; & Bell & Kozolwski, 2002).

According to management literature, there are two different approaches to categorizing a VT. Some researchers argue that VTs only regard teams that interact exclusively through ICT, excluding teams that have some physical interaction (Arrow, Berdahl, Bouas, Craig, Cummings, Lebie, McGrath, O'connor, Rhoades & Schlosser, 1996). Other researchers have a more liberal approach to VTs and allow some physical interaction, as long as most communication takes place through ICT (Jarvenpaa & Leidner, 1999; Maznevski & Chudoba, 2000). For this study, VTs are defined as teams whose members are geographically distributed and working toward a common goal, primarily using ICT to communicate and having some physical interactions throughout the year (no more than three times per year). Thus it is a combination of the definition of Vartiainen (2006) and the mentioned approach from Jarvenpaa and Leidner (1999); Maznevski and Chudoba (2000).

## **2.2 Effective Communication**

Effective communication refers to the recipient understanding the message as it was meant, with minimal disruption or misunderstanding (Varhelahti & Turnquist, 2021). Moreover, it also entails that the sender can formulate the purpose of the message in a way the recipient understands it (Kliger, 2017). Lin, Standing, and Liu (2018) refer to this as task-oriented communication, meaning that you communicate to be able to perform a task. But effective

communication also has a social dimension. Social-oriented communication helps to build relationships, team cohesion, and trust, which has been considered crucial for the effectiveness of virtual teams (Chang & Bordia, 2001). In this study, effective communication refers to both task-oriented communication and social-oriented communication.

When it comes to the task- and social-oriented communication, it always has a verbal aspect. Nevertheless, according to Watzlawick and Beavin (1967), it is important to understand that communication extends beyond verbal production. Communication usually takes place through different channels and many combinations of these simultaneously. Having said this, it is important to emphasize that all behavior is communication and remember that this is not the same as saying that all behavior is only communication (Watzlawick & Beavin, 1967).

Non-verbal communication behaviors are first and foremost complicated and subtle and can easily be missed or misinterpreted (Furnham & Petrova, 2010). However, it is an essential aspect of communication, as it adds another dimension to spoken communication (Furnham & Petrova, 2010). Some different types of non-verbal communication channels or signal systems are body-language behaviors. This includes for example body movements that accompany the spoken word. One type of body language that is more precise and seen as one of the most complex signaling systems is facial expression. It is a channel that can reflect instinctive reactions and produce unforced gestures. Furthermore, it is undoubtedly the place where most information is transmitted nonverbally. That's why FtF interactions are so favorable (Matsumoto & Hwang, 2013). Additionally, facial expressions show very important signals, namely emotions. Being able to read someone's emotional state can give the receiver insights into the sender's emotions but also their intentions, personality, credibility, and trustworthiness (Matsumoto & Hwang, 2013). It is essential to understand that body language can be consciously sent and unconsciously received. This means that the receiver can perceive body language in a different way than it was intended by the sender (Furnham & Petrova, 2010).

Another crucial channel of communication identified is the tone of voice. The tone of voice can occur both in a verbal conversation but also in a non-verbal conversation, through messages and emails. The tone of voice is not about what you say, rather how you say it, and



this is not tied to verbal communication. Even in a written message, the sender still wants the recipient to read the message in the right tone (Matsumoto & Hwang, 2013).

So the non-verbal communication channels and signals can add depth to the conversation and therefore these channels and signals are essential for effective communication (Furnham & Petrova, 2010).

In order for VTs to utilize the mentioned communication channels, Kayworth and Leinder (2000) propose that they need to have access to different communication technologies. Thus, VTs need to use both synchronous and asynchronous ICT.

Synchronous ICT provides employees with the opportunity that all parties involved can communicate and collaborate in real-time. Zoom, skype, teams, and telephone calls are examples of synchronous ICT (Varhelahti and Turnquist, 2021). Those platforms are favorable in VTs since they provide visual and auditory connections between the members (Hovde, 2014). Thus, team members are able to see facial expressions, and body language (Matsumoto & Hwang, 2013).

Asynchronous refers to communication that happens over a period of time, such as through email conversations and chat tools. It is usually centered around information sharing and knowledge transmission. Asynchronous communication has one advantage over synchronous communication since participants have more time to compose and reflect on how they can clearly transmit the purpose. This is especially important in VTs since they often face language barriers and cultural differences that can lead to misunderstandings if a message is not precisely worded (Kinney & Panko, 1996; & Kayworth & Leidner, 2000). The disadvantage of asynchronous communication is that it is time-consuming, and coordination and collaboration among team members can be challenging (Kinney & Panko, 1996).

Since different ICT are favorable for different purposes one ability that helps a VT communicate effectively is the team members' competence to choose an appropriate communication medium for each interaction and task and realize its full potential (Varhelahti, 2017; Hovde, 2014). As mentioned before, the manager can support the team by setting up guidelines on how to utilize the different ICT (Andriessen & Vartiainen, 2006; & Bell & Kozolwski, 2002).

Overall, VTs have to rely predominantly on ICT since they do not share the same physical space (Kayworth & Leidner, 2000). As mentioned, asynchronous communication carries the risk of delaying projects because it is time-consuming (Kinney & Panko, 1996). Thus, it is suggested that VTs hold virtual FtF meetings regularly as it facilitates collaboration and coordination, which is crucial to completing tasks and achieving team goals (Jarvenpaa, Knoll & Leidner, 1998; Varhelahti & Turnquist, 2021). Furthermore, it enables team members to share valuable, social, emotional, and contextual information (Kiesler & Sproull, 1992; Warkentin, Seydaa & Hightower, 1997; Dubrovsky, Kiesler & Sethna, 1991). This has been found to help team members remove perceptions of distance and reduce feelings of anonymity. Furthermore, it also helps reduce feelings of discomfort and anxiety created by poor relationships between colleagues, which have often been found in teams that communicate mainly using ICT (Kiesler & Sproull, 1992; Warkentin, Seydaa & Hightower, 1997; Dubrovsky, Kiesler & Sethna, 1991).

Thus, to not miss out on FtF communication and the positive effects it brings, the team should establish specific guidelines for meeting times, for example, when and how often they should take place (Varhelahti & Turnquist, 2021; Morgan, Paucar-Caceres & Wright, 2014).

### **2.3 Trust**

Trust can be defined as an individual's willingness to put oneself in a vulnerable position by depending on another person's actions (McAllister, 1995). Trust can also represent the extent to which one team member (i.e., trustor) can rely on a colleague (i.e., trustee) to perform a particular task critical to the trustor without monitoring or controlling the behavior (Mayer, Davis & Schoorman, 1995).

Trust is a widely studied phenomenon and has shown to be one central concept responsible for a team's success and performance (Jarvenpaa, Knoll & Leidner, 1998 & 1999; Krebs, Hobman & Bordia, 2006; Peters & Karren, 2009; Polzer, Crisp, Jarvenpaa & Kim, 2006). Further, it has been shown to positively influence teams' participation and contribution at work (Bandow, 2001; Salas, Sims & Burke, 2005).

This study focuses on two dimensions of trust: cognitive-based trust and affect-based trust (Lewis & Wiegert, 1985; Wang, Tomlinson & Noe, 2010).

Cognitive-based trust refers to one team member's perception of a colleague's competence, reliability, and dependability (Lewicki & Bunker, 1995; Mayer, Davis & Schoorman, 1995; McAllister, 1995). It can be argued that cognitive-based trust is essential in VTs. As mentioned before, VTs do not work in the same physical space (Bell & Kozlowski, 2002; Lipnack & Stamps, 1999). Thus, daily work activities in VTs are not visible to colleagues or managers. This creates a risk of team members working in isolation from each other (Kirkman, Rosen, Gibson, Tesluk & McPherson, 2002). This can be even amplified when team members work across different time zones and thus do not share the same working hours (Bell & Kozlowski, 2002). By sharing information and knowledge, team members can bridge the virtual gap between each other and increase cooperation (Kramer, 1999; Webster & Wong, 2008; Breuer, Hüffmeier & Hertel, 2016). This behavior demonstrates that they are willing to cooperate with collective goals in mind, rely on each other, meet deadlines, and cooperate to achieve a collective goal (Kramer, 1999; Webster & Wong, 2008). This is strongly connected to cognitive-based trust as virtual team members fully rely upon and make themselves dependent on each other to complete a task without daily interactions or mutual control (Powell, Piccoli & Ives, 2004; Platt, 1999). Galvin, McKnight, and Ahuja (2001) can support this finding as they found that VT members who trust their colleagues cooperate more than those who are less certain about the trustworthiness of their colleagues.

In contrast to cognitive-based trust, affective-based trust refers to trust between two parties rooted in close emotional bonds (Lewicki & Bunker, 1995; McAllister, 1995). Both parties express care for one another and are concerned for each other's well-being. However, because team members of VTs have little or no personal contact and are visually isolated, it inhibits the development of personal relationships among virtual team members (Sivunen & Nordbäck, 2014; Handy, 1995).

Mc Allister (1995) emphasized that despite the difficulty of building affective-based trust, it is crucial to dedicate time to developing personal relationships. Further, she found cognitive-based trust to be more fragile than affective-based trust when team members encounter task-related problems. Since cognitive-based trust is based on the perception of a person's competence, reliability, and dependability, it will most likely decrease if a deadline is not met or a person fails to meet the discussed expectations (Germain, 2011). At the same time, Germain (2011) argues that affective-based trust can counteract cognitive-based trust

issues since it is rooted in personal relationships rather than task-related trust. This means that if a team has affective-based trust but experiences a violation of the cognitive-based trust, the team still has a trust base. Therefore, a team that develops affective-based trust can more readily maintain trust despite challenges. As mentioned above, VTs often encounter challenges that could harm cognitive-based trust. For example, language barriers can more easily result in misunderstandings on deadlines (Andriessen & Vartiainen, 2006). Furthermore, team members of a VT that share an emotional bond are more likely to share feedback and show empathy and emotions, which is essential for collaboration (Morgan, 2018). Thus, it is essential to develop cognitive-based and affect-based trust to overcome problems and challenges as a team (Germain, 2011).

Since trust is crucial for team performance, managers and practitioners must support their team to develop and maintain it (Jarvenpaa, Knoll & Leidner, 1998; Jarvenpaa & Leidner, 1999; Krebs, Hobman, & Bordia, 2006; Peters & Karren, 2009; Polzer, Crisp, Jarvenpaa & Kim, 2006).

## **2.4 Team Cohesion**

Li, Mao, Li, and Zhou (2021) suggest that organizations and managers should aim to build cohesive teams when facing a competitive environment as they are more likely to cope with business challenges.

Team cohesion is one of the earliest and most widely studied team constructs. Up until today, there is no coherent definition of team cohesion (Li, Mao, Li & Zhou, 2021). This study applied a multidimensional view on team cohesion. When taking the multidimensional approach, studies differentiate between social and task cohesion (Beal, Cohen, Burke & McLendon, 2003). On the one hand, social cohesion describes the phenomenon that individuals stay in a group because they feel attached as individuals and want to interact with one another (Evans & Jarvis, 1980). On the other hand, task cohesion refers to the shared commitment to tasks and overall motivation to achieve organizational goals (Li, Mao, Li & Zhou, 2021). Thus, in this paper, team cohesion refers to how individuals are attracted to one another, and motivated to interact in order to commit to performing the group's task (Paul, Drake & Liang, 2016).

Team cohesion brings several other positive attributes to a team (Cartwright, 1968; McGrath, 1984; Shaw, 1981). Members of high cohesive VTs have been shown to communicate more with each other than individuals of less cohesive groups (Jarvenpaa & Leidner, 1999). Furthermore, team cohesion positively affects the quality and amount of interaction among team members (Cartwright, 1968; McGrath, 1984; Shaw, 1981). Interaction is more friendly and cooperative and entails more attempts to reach agreements and improve coordination between group members of cohesive groups (Shaw & Shaw, 1962). This is explained by members having a stronger feeling of belonging to the group and being more motivated to achieve the established group goals. With greater perceived team cohesion team members are more likely to challenge one another to achieve coordination and consensus in the group (Cartwright, 1968).

In 2021, Grossmann, Nolan, Rosch, Mazer, and Sales conducted a meta-analysis to investigate the cohesion-performance relationship by examining measurement moderators, and distinguishing modern and traditional team characteristics.

The meta-analysis examined social and task cohesion and their relation to performance separately. Additionally, the authors investigated how virtuality impacts the cohesion-performance relationship.

Grossmann et al. (2021) expect that cohesion correlates to performance differently in VTs compared to FtF teams. In general, it is assumed that task cohesion is more strongly correlated to performance than social cohesion. But Grossman et al (2021) suggest that this correlation is even stronger in VT compared to FtF teams since VT might be more focused on task-based elements rather than social elements. This expectation is based on previous studies by Siebold (2006); Daft and Lengel (1986); Tannenbaum, Mathieu, Salas, and Cohen (2012) who suggest that social bonding can be challenging in VTs due to the lack of time spent face-to-face which reduces the opportunity for rich and spontaneous conversation. This can lead to fewer opportunities for social cohesion to develop.

Grossmann et al. (2021) assume that due to the lack of social cohesion, task cohesion becomes more salient. This means that shared goals become the mechanism through which team members of VTs come together. This is in line with previous research conducted by

Maynard, Mathieu, Rapp, and Gilson (2012) who found that task cohesion can predict performance even when a team lacks social cohesion.

The results of the meta-analysis by Grossmann et al. (2021) were somehow surprising since virtuality did not have an impact on the social cohesion-performance relationship. Thus, no difference was found in the cohesion-performance relationship between VTs and FtFs. The authors suggested that social cohesion can develop due to the range of ICT tools available. These allow for rich communication, which in return allowed team members to build valuable relationships (Grossmann et al., 2021). This is reassuring since it indicates that virtual team members can build relationships and feel attached despite possible geographical distribution.

Based on the presented findings of the literature, the authors of this study conclude that social cohesion and task cohesion impact performance in VTs.

## **2.5 Structure**

This study will identify structure, as the development and maintenance of norms, roles, and interaction patterns in a team (Korsgaard, Picot, Wigand, Welbe & Assmann, 2010). The authors of this study argue that establishing and implementing a structure can increase coordination within a VT. Coordination refers to the team's efforts to plan, sequence, and monitor the interdependent actions of its members. This process is a significant predictor of team effectiveness (LePine, Piccolo, Jackson, Mathieu & Saul, 2008).

One way to develop norms within a VT is by developing a shared knowledge structure. This means that a team develops a shared understanding of the tasks and corresponding strategies which are necessary to achieve the overarching team goals (Marks, Zaccaro & Mathieu, 2000). VTs are most often highly heterogeneous in terms of cultural and organizational backgrounds (Wong & Burton, 2000). Heterogeneity within a team can lead to team members having a very distinct understanding of work-related attributes. Thus, a different understanding of how to complete tasks in order to achieve a goal can increase the potential for misunderstandings and offers a greater risk for conflicts (Wong & Burton, 2000). Thus, the authors of this paper argue that creating a mutual understanding of how tasks are approached and completed can increase coordination within a team. This can be supported by

a study that found teams with shared mental models to display effective coordination which leads to higher team performance (Korsgaard et al., 2010)

Another structure that seems to be crucial for VTs is to develop a clear understanding of each team member's knowledge and specialization (Lewis, 2003). As mentioned above VTs are often heterogeneous (Lipnack and Stamps, 1997). Heterogeneity can not only concern cultural differences but can also be displayed in team members' diverse skill sets, knowledge, and experiences (Andriessen & Vartiainen, 2006). If teams are able to utilize their diverse attributes they can maximize the potential of a team (Lipnack and Stamps, 1997). However, one challenge that VTs face is weak relationship ties that connect team members to one another. The lack of strong ties results in less communication between team members and fewer reciprocal requests from one another. In return, this decreases the interdependence of team members and therefore performance within VTs (Granovetter, 1973) The authors of this study suggest that creating an understanding of each team member's knowledge and specialization can encourage team members to exchange information that is crucial to complete tasks. Therefore, team members might communicate more frequently with one another which can in return strengthen the relationship ties between members

Concluding it can be said that creating structure can strengthen coordination within a VT. In return, these processes can increase performance (LePine et al., 2008).

## **2.6 Effective Communication, Trust, Team Cohesion, and Structure in Virtual Teams**

As mentioned in the introduction of this study, effective communication, trust, team cohesion, and structure are interconnected.

According to Salisbury, Carte, and Chidamvaram (2006), team members of VTs often experience physical distance. This distance can lead to a psychological distance between team members, which in turn can inhibit VT from building team cohesion and trust.

Effective communication has been found to be an essential aspect of building trust in VTs (Minhas, Zhang, Tran, and Cohen (2011). Although theories suggest that FtF communication in a physical setting is crucial and cannot be replaced for building trust, empirical studies revealed different results. Thus, it has been shown that computer-based communication media

can carry the type of communication cues that individuals use to develop trust. Supporting this finding, the social information processing theory (Walther, 2015) proposes that team members who use ICT can exchange social information to the same extent as non-virtual FtF teams, just at a slower rate.

A study conducted by (Lin, Standing & Liu, 2008) has proven that communication directly impacts creating team cohesion. Studies showed that FtF teams have higher feelings of team cohesion than VTs (Straus & McGrath 1994; Wakertin, Sayeed & Hightower, 1997). However, it is assumed that it is not the lack of face-to-face communication that negatively impacts team cohesion but too little media richness. This implies that VTs that use different ICT tools can strengthen their communication and, therefore, team cohesion (Kayworth & Leinder, 2000)

Concluding, it can be said that effective communication is crucial to building trust and team cohesion in VTs. It can be seen as a tool to bridge the geographical distributions of team members and reduce the psychological distance (Varhelahti & Turnquist, 2021). This being said, it is essential that VTs make use of the different ICT (Kayworth & Leinder, 2000). It can be argued that synchronous communication is especially important to build trust and team cohesion as non-verbal channels such as body language, facial expression, as well as the tone of voice can be used (Jarvenpaa, Knoll & Leinder, 1998). These are known to be especially important as they carry social cues to build interpersonal relationships between team members, such as emotions (Maznevski & Chudoba, 2000)

Breuer, Hüffmeier, and Hertel (2016) also found trust to have an impact on effective communication and team cohesion. Low trust results in irregular communication, which makes it difficult for a group to develop and maintain a cohesive bond. In line with these findings, Gaan (2012) found that high levels of trust relate to high levels of perceived team cohesion.

Based on the previous findings this study argues that structure can also help to increase the feeling of team cohesion. Creating an understanding of every team member's tasks and specialization and encouraging people to collaborate more with each other. In return, this can lead to team members feeling a stronger attachment to their colleagues. Furthermore,



Granovetter (1973) argues that establishing strong ties leads to an increase in communication and more questions being asked between team members. In return, this can increase interdependence and performance (Granovetter, 1973).

### 3. Experts Interviews

As mentioned before (see *section 1.3.1*), interviews with experts were conducted regarding effective communication, trust, and team cohesion in context with high-performing teams. We were especially interested in their theoretical knowledge and practical experience and how these can broaden the theoretical findings presented in the literature review.

In this section, the data collected from the expert interviews will be presented. Firstly, an outline of the criteria used to define an expert will be provided. Then an overview of how the interviews were conducted. Lastly, the data conducted from the expert interviews will be presented.

#### 3.1 Methodology of Experts

##### 3.1.1 Definition of an Expert

In order to define the term expert, the two following criteria were developed. Only if the participants fulfilled both criteria could they participate in our study.

- Licensed psychologist
- A minimum of 5 years of work experience within organizational consulting

##### 3.1.2 Participants

In total, four experts were interviewed, three female, and one male. All participants are Swedish. Their working experience ranges from 7 to 13 years. The interviews were between 40 and 80 minutes long.

Participants	Gender	Nationality	Working Experience	Lengths of Interview
Expert1	Male	Swedish	10 years	40 minutes
Expert 2	Female	Swedish	20 years	80 minutes
Expert 3	Female	Swedish	14 years	62 minutes
Expert 4	Female	Swedish	7 years	60 minutes

*Table 2: Overview of experts that participated*

### 3.1.3 Data Collection

We took a deductive approach to develop a structured questionnaire (see *Appendix D*) for the interview. Thus, we based our questions on the knowledge we obtained from previous research concerning effective communication, trust, and team cohesion. In addition to investigating the three concepts, we were curious if experts identify other essential concepts for building a high-performing VT that we have not considered. Thus, we asked the following question:

*"Based on your knowledge and experience, do you identify other fundamental concepts for developing a high-performing team?"*

### 3.2 Insights from Experts Interviews

Interviews with experts were conducted concerning effective communication, trust, and team cohesion, in VTs. These interviews were conducted in order to extend the theoretical knowledge obtained from existing literature. In the following sections, four key insights from the expert interview will be emphasized.

First of all, the experts supported the connection between trust and collaboration which was found by (Gaan, 2012). Thus, employees who trust each other show more vital collaboration than a team that lacks trust. Experts agreed that trust leads to developing behaviors that, in return, elicit specific behavior, which in return strengthens collaboration. For example, people who have a trusted relationship rely on each other, are not afraid to ask questions, and are more prone to ask for help if they face a problem. Furthermore, experts emphasize that trust and collaboration become even more critical when tasks become more complex.

From the experts' interviews, it was understood that a clear mission is crucial for developing team cohesion. In order to achieve a mission, specific goals need to be developed. This can be supported by Li, Mao, Li & Zhou (2021) who argue that task cohesion refers to a team's motivation and commitment to achieve common goals. Based on practical experience, experts suggest that when teams develop those goals together, employees feel more committed and motivated to achieve them. Furthermore, team members seem to feel more connected because they need each individual to complete the tasks and achieve the goals.

From interviewing the experts, it was understood that communication functions as an enabler in developing trust and team cohesion. In their work as consultants, they often experience that a lack of communication can be the underlying reason why employees do not trust one another or why goals cannot be achieved. Furthermore, experts emphasized that communication is associated with greater challenges in VTs than in FtF teams. One reason is that daily and spontaneous conversations are seldom, and subtle cues transmitted through body language are difficult to detect via a screen. Due to this, experts encourage managers to dedicate working hours to bringing the team together in a virtual setting. The time should not only be used to discuss work-related topics but should also create a room where colleagues can exchange personal topics.

As mentioned in *section 1.3.1*, in addition to the three concepts that were identified to be crucial, experts also mentioned **structure** as an additional concept that is important for building a high-performing VT. This was found to be interesting as the structure termed coordination by Tan, Ramayah, Ai Ping Teoh, and Cheah (2019) was not found to be significant. Based on the contradictory results received by this study and the expert interviews, the authors decided to investigate structure further by conducting an extended literature review. This review included the three concepts and structure. Structure was found to be a concept that could have an influence on VT's team performance. Therefore, the authors decided to include structure as the fourth concept in this study.

## 4. Methodology

### 4.1 Research Approach and Design

The qualitative approach was considered the best suitable way to generate data, live up to the purpose of this study, and answer the research question. Using a qualitative study through structured interviews is a method to get a respondent's experience of a particular phenomenon (Willig, 2013). Additionally, qualitative research allows for more flexible, evolving, and emergent research rather than a rigid and predefined approach (Grossoehme, 2014).

This approach was chosen as the study aimed to develop actions managers can take to build high-performing VTs. The study investigates four concepts that have been identified as essential for building a high-performing team; namely effective communication, trust, team cohesion, and structure. In this study, employees were interviewed since it is believed that their insights are a valuable source of knowledge and can add to existing literature. Examining what employees need to communicate effectively, create structure, build trust, and team cohesion will provide a foundation to develop actions that managers of VTs can take to help the team become high-performing. Hence, the study will focus on employees' insights and experiences to develop actions that can enable effective communication, create trust and team cohesion, and set up structure.

The research was designed based on the approach described above.

Initially, a literature review was conducted to collect existing research on the three concepts; effective communication, trust, and team cohesion concerning a virtual work environment. The next step was interviewing experts (see *section 3.1.1*). For this, questions were created based on the three initially identified concepts of effective communication, trust, and team cohesion. As mentioned before, in addition to the three concepts identified during the literature review, the experts emphasized a fourth concept; **structure** (see *section 3.2*). Based on this result from the experts' interviews and an extended literature review, structure was added to the literature review.

The interviews and literature review were followed by developing a questionnaire for collecting empirical data. Thus, a deductive approach was taken to develop the interview questions for employees (Appendix B). After that, the interviews with the participants were held (see *section 4.3*). Once all interviews were conducted, the recorded material was

analyzed using thematic analysis (see *section 4.5*). When the data was analyzed, the results were in head themes and subthemes presented and then discussed together with a literature review and results of the expert's interviews to answer the research question. Lastly, a critical reflection on the study was conducted.

#### **4.2. Literature Review**

The literature review was approached by searching the databases LUBcat, LUBsearch, Google Scholar, SAGE Journal, ELSEVIER, EBSCO, and Scopus. Literature was searched by combining different relevant search terms for our study: Trust and *Virtual Teams*, *Challenges* and *Virtual Teams*, and *Communication* and *Team cohesion*. After relevant literature was identified, the reference list was searched for titles of articles that could be of interest for the conducted research. Its usefulness was assessed by reading the abstract and the discussion. The material contains books and academic articles.

#### **4.3 Participants**

To fulfill the purpose of this study, the population of interest is employees working in VTs. This study used a mix of convenience as well as purposeful sampling. Convenience sampling is a non-probability form of sampling (Stratton, 2021). This sampling method is less objective than the probability techniques since not all members of the targeted population have the same chance to participate. Convenience sampling was used since the study was announced on Facebook groups and LinkedIn and targeted employees who work virtually. The purposeful sampling method was used since the authors directly reached out to employees in their networks they knew fulfilled the criteria (Stratton, 2021).

To ensure that the sample was appropriate for the study, participants had to meet the following criteria to participate in the interview: participants were members of a VT. They had colleagues geographically distributed that they met less than four times a year, collaborating with them to reach common goals. A Google Form asking for the mentioned criteria was created. Furthermore, the form included a description of the study and a paragraph about how the data would be treated (see *Appendix B*). This form was sent to employees interested that could be of interest to our study and the people in our networks. They were invited to an interview via email only if they met all criteria. For some of the

participants, the job title included "manager" (see *Table 2*). At the beginning of the interview, it was ensured that they did not have formal employee responsibilities in those cases.

In total, 13 participants were interviewed. All interviews were conducted in English. Since most participants were not living in Lund or Malmö, all interviews were conducted online using Zoom or Google meets. For an extended presentation on the participants' main characteristics and information, see *Table 3*. This will allow the reader to examine whether this study is relevant to them (see *section 4.6*). Furthermore, this is also shown to strengthen the transferability or generalizability of this study (for further explanation, see *section 4.6*)

ID	Gender	Age	Nationality	Current Position	Years/Months of Working Virtually
A	Female	26	German	Customer Success	3 months
B	Female	30	German	Project Manager	2 years
C	Female	27	German	Project Manager	3 years
D	Female	28	Brasilien	Support Engineer	1 year
E	Female	28	Chinese	UX Designer (consultant)	3 years
F	Female	24	British	Marketing Manager	6 months
G	Female	28	Italien	Talent Acquisition Consultant	5 months
H	Female	24	Swedish	Human Resources Manager	2 years
I	Female	25	Bulgarian	Customer Success	1,5 years
J	Female	27	American	Customer Success Manager	2 years
K	Male	29	Swedish	Engineer	2 years
L	Male	34	Brasilien.	Governance Manager	5 years
M	Male	26	Swedish	People Coordination Manager	4 years

*Table 3: Demographics of Participants*

#### 4.4 Data collection

In order to collect our data, online interviews were conducted via Google Meet and Zoom. The interviews were structured, allowing the respondent to speak freely about the topics and giving the interviewer the chance to ask follow-up questions. The structured interview method was chosen because it ensures that all participants were asked the same questions. However, during the interview a dialogue could develop between the interviewee and the interviewer. This can generate more solid, deeper, and more detailed data since it allows participants room to describe and elaborate on their feelings and thoughts. Despite elements of a semi-structured approach, as all respondents were asked the same questions, the data was collected through a structured interview format. As each respondent was asked the same questions in the same order, which is a structured interview method (Bell, Bryman & Harley, 2019).

The interviews started with an introduction to the research being conducted. Participants were asked for consent to record. Further ethical considerations such as confidentiality, anonymity, and voluntary participation were outlined. Before the interview, participants were asked to inform the interviewee if questions were unclear, or if they needed more time to reflect upon the question before answering it. Participants were also ensured that there were no right or wrong answers. During the interview, interviewers summarized the participants' answers to ensure correct interpretation and to give them a chance to correct or further elaborate their thoughts.

The first questions were used to gather background information about the participant, such as age, nationality, current position, and how long s/he has been working virtually. This information gave a more concrete idea of the sample interviewed. Following the background questions, the structured questions regarding the four concepts were asked.

The interview was divided into a descriptive and an evaluative part (Willig, 2013). The descriptive part included questions such as "Tell me about a typical virtual meeting." While the evaluative part aimed at capturing the participants' thoughts on building high-performing teams, such as "What do you think is needed to build a high virtual performing team?" (see *Appendix B* for the complete interview guide).



The interviews took between 45 and 60 minutes to complete. The interviews were recorded live via the program "voice recorder", and recording was always started after a verbal agreement to record (see *section 4.7*).

#### **4.5 Data Analysis**

After conducting the interviews, the material was base transcribed. When applying base transcription, the focus is on the meaning of what participants answered (Norrby, 2014). Thus, transcriptions only include answers in terms of words and not pauses, pronunciation, or prosodic features. The benefit of base transcription allows the authors to save time, and the material becomes more readable (Norrby, 2014)

A deductive thematic analysis was applied and used to analyze the empirical data. This method was used to analyze, identify, organize, and report themes found within a data set (Braun & Clarke, 2006). The deductive approach allows the researcher to approach the data and view it from their theoretical interest, which is favorable if the researchers are especially interested in a topic viewed from a previously decided theoretical approach (Braun & Clarke, 2006). Furthermore, it is argued that a thematic analysis can highlight similarities and differences in participants' answers (Braun & Clarke, 2006). The Miles and Huberman (1994) approach was used for analyzing the data.

The first step in the process was data reduction. In order to reduce the data and draw meaningful conclusions, essential aspects of the answers were identified. At the same time, it needs to be assured that no relevant data is being eliminated. Therefore this was done with cautiousness.

After the authors coded every question, they were further divided into clusters. Clusters were then organized and structured by identifying similarities and differences and dividing clusters into categories. To have a clear process, the categories were coded by color. After doing this, new similarities and differences were found, which led to combining or dividing some categories. When reaching this state, the categories had been so developed that they were now seen as themes.

The second step includes data display (Miles & Huberman, 1994). Hence, the identified themes were systematically analyzed, and conclusions were drawn. When the themes and subthemes were generated, quotes from the participants were utilized to provide the themes with more meaning. At this stage, it was determined that the data analysis was not linear, which led to changes in the order of the sub-themes. Those types of changes have been done throughout the whole data analysis process.

To conclude, the themes presented in the results are of the semantic form, defined as explicit statements (Braun & Clarke, 2006). However, in the discussion (see *Chapter 6*), the authors of this study analyzed the underlying meaning of the data.

#### **4.6 Reflexivity, Credibility, and Transferability**

Reflexivity are based on the researcher's awareness of the influence that his/her interpretations and preconceptions about a phenomenon can have on the data results. It is essential to understand that individuals might differ in their conceptions of a phenomenon. Therefore the researcher must understand how one's own understanding can influence the interpretation of the empirical data (Willig, 2013). According to Willig (2013), transparent and honest reflections need to occur throughout the research project. From the beginning of this study, there has been an awareness and reflexivity about the choices made. The authors discussed how their own perceptions and individual interests might have impacted the result during the whole research process. This has been done to mitigate the risk of researcher biases (Willig, 2013). Regardless of this, subjective perceptions will inevitably influence and shape the results and interpretation of the empirical data, theories, and previous research (Willig, 2013). Thus, the collected material was read individually to avoid influencing each other's initial interpretations. After that, the thematic analysis was done together to get an ordinary picture and achieve higher reliability than if only one person interpreted the material. It has also been an advantage for the reflexivity of the study that the two authors interpreted the data. The authors believe this contributed to greater reflexivity throughout the process.

Consciousness was also present in interpreting the interview material, trying to avoid assumptions that may have been reflected in the questions asked during the interviews. Thus, to ensure that respondents had similar conditions, all interviews were conducted online and

by the same interviewer. This reduced the risk of researcher effect and respondent bias, which increased the credibility of the study's findings. An additional sign of the study's credibility was that the respondents' statements were similar to each other (Bryman, 2018). This indicates that the questions respondents answered had high validity (Willig, 2013).

Transferability refers to generalizability. In qualitative research, it is crucial to provide the reader with an extended description which means a thorough description of detail in a context. This helps the reader judge if the findings can be transferred to a new context (Bryman, Bell & Harley, 2019). To provide the reader with detailed information about the interviewees context, the demographics of the research sample are presented in *Table 3*. Furthermore, different participants' quotes emphasized the diversity of interpretations around the four studied concepts (i.e., effective communication, trust, team cohesion, and structure) and their relation to high-performing teams. The quotes also provide the reader with a broader context of the situation.

#### **4.7 Research Ethics**

The Swedish Ethical Review Authority guidelines were taken into account. It refers to how the authors behaved concerning the respondents who took part in the study. It also included how the data was collected, stored, analyzed, and presented (Vetenskapsrådet, 2017; & Saunders, Lewis & Thornhill, 2007). Regarding the processing of sensitive data, all precautions have been taken not to compromise the anonymity of the respondents. Interviewees were told that their participation was voluntary and they could withdraw at any time and withdraw their answers. Participants were asked if it was ok to record the interview before the recording began and were told they could subsequently request that their participation be deleted and the recording erased. All interviewees agreed to the recording. To protect the participants and their employers' their names were anonymized.

## 5. Result

In this chapter, the data collected from the 13 employees will be presented. The results are divided into six sections. The sections were created by coding, analyzing, and interpreting the data based on the most common findings. The presented quotes support the data presented.

Section 5.1 contains the data on effective communication and its four sub-themes (i.e., the transmitting the purpose of a message, use of different communication technologies, utilizing the various functions of ICT, and information sharing). Section 5.2 presents the data on trust and its three subthemes (i.e., reliability, personal relationships, and mutual trust). The data on the concept of team cohesion was divided into two sub-themes: team goals and objectives, and collaboration, which will be presented in section 5.3. Section 5.4 contains three sub-themes (i.e., work processes, understanding of team roles and tasks, and supportive structure) and presents the data on the structure. Further, section 5.6 describes the connection between effective communication, trust, team cohesion, and structure. This is followed by section 5.7, which will present actions that managers can take to enable effective communication, create trust and team cohesion, and implement structure.

### 5.1 Effective Communication

Regarding effective communication, the participants emphasized that it is crucial to transmit the message as clearly as possible. Since communication takes place through ICT, employees have to be even more concerned over how they formulate a message and the purpose of the communication. Participants also stressed that different ICT need to be used for different communication purposes.

#### 5.1.1 Transmitting the purpose of a message

Effective communication in VTs was vital for all participants. They strongly emphasized that the transmission of the message was essential to prevent misunderstandings. This sub-theme is highly connected to task-oriented communication (Watzlawick & Beavin, 1967). The task-oriented communication refers to the recipient understanding the message as it was meant, with minimal disruption or misunderstanding (Varhelahti & Turnquist, 2021).

*“All parties understand ultimately what the message is about. I have the feeling that in a virtual setting a message can often be construed and that people misunderstand each other, so effective communication is very important” - Participant B*

The sender must formulate the message, so the receiver immediately understands what the sender intends to say. Since communication in VTs occurs primarily through ICT, the participants emphasized that more attention needs to be directed to how a message is formulated.

*“It takes an extra level of consideration regarding sending stuff, so does the messenger I send read in the way it was intended to and the way I wanted it to be read” - Participant F*

Furthermore, the participants also emphasized that effective communication needs a clear purpose. The purpose should be formulated beforehand to understand the reason for a conversation. Furthermore, the purpose helps to not get lost in other topics that need to be discussed. Defining the purpose of a conversation is equally essential for verbal and written communication.

*“If you are talking about something as a team or with a colleague that you have to focus on the purpose of the conversation and why are we having this conversation to not lose track of the purpose of the conversation and the reason we are communicating with each other because I think if you keep the purpose in mind the communication will be effective in relation to what you try to achieve with the conversation” - Participant H*

*“ I would be clear with the purpose, even if it is in a meeting I would start with the purpose or if I text someone or send I email I would say Hey I’m writing to you regarding.... to make sure that we all are communicating about the same thing and are on the same page” -*

*Participant C*

### **5.1.2 Use of different communication technologies**

Participants also pointed out that different communication tools are necessary for effective communication. Among participants, there was an agreement that chat tools are primarily used for short questions, delegating tasks, and sending updates. In contrast, email was the least used communication tool, mainly because it is more formal, and people felt that they would be less likely to receive a response. If a problem needs to be discussed, colleagues

would like to give feedback to one another, or an important decision needs to be made, most participants would use video calls.

*“Slack is our main communication tool because you can have different channels, you can also have personal chats, we also use our VR tool for meetings, as well as g-meets... the different platforms have different purposes. If I can describe something in two sentences I go for slack. If I have a question I need an immediate answer to, I also use slack. But if I am having a discussion with someone, I would rather go into a g-meet and talk to them. and if we would have a workshop together we would use VR” - Participant I*

*“chat, mail, and over video... if it is a complex task I and my colleagues call each other in video format and share the screen.. so we all can see what is going on on the screen and by the computer ” - Participant K*

### **5.1.3 Utilizing the various functions of ICT**

Regarding asynchronous communication in virtual teams, all participants mentioned that using the features within ICT could add more depth to a text message. Participants used *emojis* to emphasize how a message should be read by the receiver. The same idea is applied when using the *reaction* function of ICT tools. *Reactions* are emojis that can be used to respond to another message. For example, if a team member tells a colleague s/he completed a task, the colleague would react with a heart to that message, this should show thankfulness and appreciation for the other person's work. It is argued that emojis are a helpful tool in asynchronous communication to underline the message with a tone of voice. For example, by using emojis the sender can strengthen emotions that need to be attached to the message.

*“I am using reactions and emojis a lot. With reactions I can show how I feel about a message, for example, a heart implies that I like it. Emojis help me to carry emotions...a smiley means I am happy. We also use specific reactions in team chats to react on incoming tasks ... for example, everyone uses the hook to show their colleagues that s/he has seen the task and took it over” - Participants I*

*“using emojis help me to better grasp the mood of my colleague and how I should read a message. So, I also use emojis so I can add more depth to the message than just the written text “ - Participant M*

#### **5.1.4 Information and knowledge sharing**

Participants associated effective communication with sharing information and knowledge. Proactively sharing information and knowledge between colleagues ensures that the team has the latest critical updates to achieve goals. Furthermore, this also improves the workflow. This sub-theme is related to task-oriented communication since information and knowledge sharing help the participant solve problems and collaborate regarding work-related tasks (Watzlawick & Beavin, 1967).

*“giving regular updates about the project you are working on. This way the manager and colleagues know the status and can step in or support if it is needed” - Participant A*

*“ Proactively communicating about work tasks, and topics, not being reactive but communicating regarding certain topics and handing over information which is you need in order to work proactively on tasks” - Participant D*

*“ you need to understand when do I have to inform whom...It is important to understand how needs to get the information and who needs to get the information and therefore you have to know who that audience is - meaning have some knowledge of what role and responsibilities the colleagues have” - Participant B*

#### **5.2 Trust**

All participants mentioned that the concept of trust is crucial for building a high-performing VT. During the data analyses, specific sub-themes were identified. According to the employees, reliability and building personal relationships are crucial for developing a trusted relationship. Also, employees emphasized that mutual trust between the manager and employees is essential because it is impossible to "see" if the other person is working due to the virtual setting.

### 5.2.1 Reliability

According to the participants, they need to feel that they can rely on one another to develop trust. For employees who work in a VT, reliability was closely connected to colleagues being available for each other to answer questions or help solve a problem. In this context, it can be argued that participants talk about cognitive-based trust. Cognitive-based trust entails that team members fully rely on one another to complete tasks without daily interactions or mutual control (Powell, Piccoli & Ives, 2004; Platt, 1999)

*"Being there you need it, you being there when they need it. So they know that they can count on you... If I feel that I can rely on someone I will trust them more... if someone is not delivering on their task without communicating it or asking for help, then I will not be able to trust that person that much any longer" - Participant G*

*"So trust is that I know that I can count on them... in a normal office you can see that your colleagues are working and you can talk to them, but that is not happening in a virtual team so you need to be available to answer questions regularly... that's super important ... I need someone I can really rely on." - Participant C*

On the one hand, participants mentioned that a trusted relationship could easily be disrupted if a colleague says s/he is going to finish a task but then does not do it. On the other hand, employees emphasized that a relationship where they can rely on their colleagues reduces stress because they do not have to worry that a task will be completed on time. This shows that participants see cognitive-based trust as fragile and can be unsettled easily. As mentioned before, a study by McAllister (1995) who compared cognitive-based trust with affective-based trust found that cognitive-based trust is more fragile.

*"If people say something but then do not do it, I am not able to rely on people and therefore I do not trust them" - Participant L*

*"If I know my colleagues finish their tasks according to the deadline, I am less stressed because I do not have to think about them and check-in...I can concentrate on my own tasks instead" - Participant K*



### 5.2.2 Personal relationships

In connection with trust, all participants emphasized the importance of building personal relationships with their colleagues. Thus, being able to talk about personal matters with colleagues increases trust and for personal relationships to develop, it is of importance that team members build affective-based trust. Affective-based trust refers to close emotional bonds and that both parties express care for one another (Lewicki & Bunker, 1995; McAllister, 1995; Sivunen & Nordbäck, 2014)

*"To build trust I think it is important to also have some sort of personal relationship... ask questions, so for example not only talking about the professional parts, your tasks and what's going on at work-wise but to present and interested in personal issues as well" - Participant*

*D*

The participants emphasized that spontaneous conversations where team members talk about their private lives are lacking in a virtual work environment. Thus, participants said it is important to actively create time to build personal relationships by talking about non-work-related topics in a virtual meeting.

*"one thing that I personally like to do to start off on a great foot is to get to know them on a semi-personal level, especially in a virtual setting I think there can be this really big disconnect, between you being a person and a human to being a colleague, because we are not in the office and we do not have that side chatter... how was your weekend... because we don't get to hear that there is almost this impersonal connection... So one thing I like to do in my virtual work to build this connection and relationship is to have one-and-one calls where! don't ask the work-related questions" - Participant J*

### 5.2.3 Mutual trust

During the interviews, it became evident that mutual trust is vital for employees' work performance. For participants, mutual trust has two meanings: Firstly, mutual trust between the manager and the employee means that the manager trusts the employee that s/he can perform their work independently and does not have to be controlled or monitored. Secondly, employees ensure that they deliver on their committed tasks.

*"Trust means that I have a lead that does not have to check in with me all the time and see what I am doing but who gives me the freedom to do my work in the way that I want to do my work because they are sure that I can achieve the goals" - Participant H*

*"I think trust comes from both sides... there is obviously trust that employees contribute to you doing what you say you're gonna do" - Participant F*

The participants also believe that mutual trust between colleagues is essential. They argue that trusting each other's knowledge and skills can help the team collaborate better and deliver good results.

*"Well trust is, I guess that you believe in your colleagues, that they are going to deliver good work and then my colleagues believe that I will deliver good work... and with this kind of trust we together build a good product" - Participant E*

### **5.3 Team cohesion**

The data material showed that team cohesion is essential to create a team spirit and help the team understand each other better and develop teamwork. This can be developed by working towards team objectives and goals. Therefore, collaboration increases because employees are aware that they need the skills of every team member in order to accomplish the best possible result.

#### **5.3.1 Team objectives and goals**

In order to create team cohesion in a virtual team, the majority of the participants emphasized the importance of developing team objectives and goals. It is believed that having shared objectives and goals helps create a feeling that the team is working together and in the same direction, even if they are geographically distributed. Furthermore, participants mentioned that developing common objectives and goals creates team affiliation. This can further be explained by the literature on task cohesion as this refers to the feeling that the team workstogether to reach common goals ( Li, Mao, Li & Zhou, 2021)

*"common goals are really important...if everyone works in the same direction it is a lot more powerful than if everyone is only looking at their own goals... and you will get to the common goal faster and it's going to be more efficient as well" - Participant F*

*"The feeling that we need everyone in the team to achieve the goals that we working towards"  
- Participant H*

Participants also saw the risk of team members focusing on their individual success if a shared goal is missing. In return, this could prevent a team from becoming high-performing.

*"Team cohesion is important because if you have a team of 10 people, and only 5 people are willing to go the extra mile and the rest is not, you will not build a high-performing team, thus building a common goal culture is very important" - Participant G*

### **5.3.2 Collaboration**

Participants saw a strong connection between team cohesion and collaboration. Collaboration means that people are working together to perform and achieve a common goal. However, for participants, the collaboration had different meanings. On one side, it was seen as helping and supporting each other if problems occurred. On the other hand, collaboration meant that team members had to work together on the same task to complete it.

*"team cohesion I think of as collaboration, meaning that you...can flourish, and strive together. I often work with other team members on the same tasks, so we can complement each other's skills and knowledge" - Participant A*

*"I think cohesion in terms of collaboration, in my mind they go hand-in-hand. Having a collaborative environment allows me to work and support my colleagues if needed." -  
Participant J*

Participants also mentioned that a team often achieves higher quality results when working together than an individual working on its own. Since collaborating brings in different perspectives as well as different knowledge.

*"To have a good team cohesion or collaboration is essential for me to work together with my team because I strongly believe that we need each other to approach the task in the best suitable way and achieve the best possible result" - Participant D*

*"that everyone feels that they are needed and that I need my colleagues.. this is important because the total sum of what we can achieve together is bigger than what everyone can achieve by themselves" - Participant H*

## **5.4 Structure**

Participants pointed out three themes related to structure to develop high-performing teams. On one side, structure was seen as setting up transparent processes that enabled the team to work cohesively. On the other side, structure was seen as a tool a manager can use to facilitate team members to perform their work in the best way possible. Lastly, structure, as in clear role and task division within a team, was mentioned to be essential for employees to perform their work.

### **5.4.1 Standardized work processes**

Establishing transparent processes was important for participants because it helped to achieve goals. On one side, it gives the team a framework on how tasks should be approached and completed. This ensures that employees follow the same steps and that work is performed coherently within the team.

*"Processes help the team to be sufficient and productive otherwise information will be lost. Processes give the framework for a team to complete the tasks in a cohesive way and as a team achieves the goals." - Participant A*

*"structure is especially important in a virtual team. Having set work processes to strengthen collaboration and help employees to find the information they are looking for without being dependent on a colleague." - Participant L*

### **5.4.2 Define team roles and tasks**

From the participants' responses, it is crucial to have a general overview of colleagues' tasks. It strengthens the team feeling because everyone understands how each team member

contributes individually to achieve the team goal. Additionally, clear roles and tasks simplify collaboration because team members know whom to address regarding specific topics.

*"Knowing what my colleagues are doing creates a team feeling where everyone is working together to achieve a common goal....if I have an understanding of which tasks my colleagues are working on, it is easier for me to know who to contact regarding specific questions or problems" - Participant J*

*"I think it is important to be aware of what your colleagues are working on if we don't know what each other are working on its really hard to build teamwork" - Participant E*

Participants also pointed out the risks of employees working on the same tasks if roles and tasks are not clearly defined.

*"sometimes when co-workers are working separately and not communicate, double work can appear, so by creating a structure or a procedure the whole department can follow that to prevent double work because that is waste of resources" - Participant E*

#### **5.4.3 Supportive structure**

Participants emphasized that the virtual teams need a manager who can support the members in their day-to-day work to ensure that they can perform their best. Furthermore, the manager should create time for team members to ask questions, present their problems, or ask for help. The manager can then react to this and support the team member in completing tasks.

*"weekly meetings, check-ins ask everyone how their days or weeks are going, what are you focusing on and working on, can I help you with something? We are not obligated to explain in detail she just asks if there is anything she can do to assist" - Participant H*

*"Most of the time, I had multiple tasks to complete and it was not always clear to me which one had the highest priority, my manager helped me structure them" - Participant M*

### 5.5 Connection between effective communication, trust, team cohesion, and structure

In the interview, the four fundamental concepts, namely; effective communication, trust, team cohesion, and structure, were investigated distinct from one another. That means that participants were not asked to draw a connection between them (see *Appendix B*). However, participants still saw connections between the concepts.

*"Communication is key in order to build trust, only when we share information, are able to ask questions, and can talk about personal things, we can build a trusted relationship" -*

*Participant J*

*"I see a strong connection between trust and team cohesion. If I do not trust my colleagues to do their work, I will not be able to work with them to achieve the goal ... For me, trust is needed for collaboration" - Participant C*

*"For me, there is no team cohesion without a trust foundation" - Participant B*

*"For me, the structure is needed in order to create team cohesion. Because if the roles and tasks are not clearly divided and I know who is working on what, I don't know how to work with my colleagues... Without processes, we can not set up goals and objectives" - Participant A*

*A*

*"clear roles and tasks, helps me to feel part of the team and that we need each other to solve a problem or complete a task" - Participant I*

In the following table are the "head themes," "sub-themes," and a meaningful entity presented to provide the reader with an overview of the empirical data.

Head Themes	Sub Themes	Meaningful Entities
Effective communication	<ul style="list-style-type: none"> <li>• Transmitting the purpose of a message</li> <li>• Use of different communication technologies</li> <li>• Information and knowledge sharing</li> <li>• Utilize the various functions of ICT tools</li> </ul>	<i>"All parties understand ultimately what the message is about" - Respondent B</i>

Trust	<ul style="list-style-type: none"> <li>• Reliability</li> <li>• Personal relationships</li> <li>• Mutual trust</li> </ul>	<i>“ So trust is that I know that I can count on them ” - Respondent C</i>
Team cohesion	<ul style="list-style-type: none"> <li>• Team objectives and goals</li> <li>• Collaboration</li> </ul>	<i>“ The feeling that we need everyone in the team to achieve the goals that we working towards ” - Respondent H</i>
Structure	<ul style="list-style-type: none"> <li>• Standardized work processes</li> <li>• Define team roles and tasks</li> <li>• Supportive structure</li> </ul>	<i>“Processes help the team to be sufficient and productive otherwise the information will be lost. “ - Respondent A</i>
Connection between effective communication, trust, team cohesion, and structure		<i>“Communication is key in order to build trust, only when we share information, are able to ask questions and can talk about personal things, we can build a trusted relationship” - Respondent J</i>

*Table 4: Head themes, sub themes and meaningful entities found from the thematic analysis*

## 6. Discussion

This section will discuss the observations made during interviews with the available theory on the topic and the authors' own reflections. This section will focus on answering the research question. As presented in the results (see *section 5.6*), we could see that participants draw connections between the concepts during the interviews. Thus, we will discuss the interconnections between the four concepts.

The research question is as follows:

- *What actions can a manager implement to build high-performing teams in a virtual setting?*

### 6.1 Effective communication

The collected data showed that all participants thought it was crucial to communicate so that the receiver understands the message the same way as the sender intended it. This aligns with Vahalahti and Turnquist's (2021) definition of effective communication. Further, the participants emphasized that the purpose of the conversation is essential. This means that all participants involved in the conversation must understand why they participate and what the conversation should result in. Furthermore, participants indicated that information and knowledge sharing are crucial for effective communication. It was argued that it allows participants to collaborate more closely to achieve the goal.

Communicating the purpose of a message and sharing knowledge can be seen as examples of task-oriented communication since it allows team members to understand tasks and deliver upon them (Lin, Standing & Liu 2018). According to the empirical data, it becomes clear that task-oriented communication can enhance collaboration and help the team move closer to achieving the common goals. Thus, in this context, it can be argued that task-oriented communication functions as an enabler for strengthening perceived task cohesion in a team.

Furthermore, difficulties in transmitting the message and sharing knowledge can lead to miscommunications between team members (Varhelahti & Turnquist, 2021). According to the empirical data, this can hurt collaboration since tasks will not be clearly communicated, or essential knowledge will be lost. In return, this can lead to deadlines and goals not being achieved. As mentioned by Lewicki and Bunker (1995), Mayer, Davis & Schoorman (1995),



and McAllister (1995), these are factors that can diminish cognitive-based trust in a team. Thus, based on the empirical data, it is argued that task-oriented communication can help the team to build and secure cognitive-based trust. In return, trust has been shown to increase knowledge sharing as team members have the feeling that their input is validated and used for the intended purpose. As a result, cooperation can maintain the feeling of team affiliation (Breuer, Hüffmeier & Hertel, 2016).

According to the empirical data, participants saw different benefits in using asynchronous and synchronous ICT for task-oriented communication.

On the one hand, participants said that asynchronous communication has an advantage over synchronous communication since it gives the sender time to think about how to formulate the message. It can be argued that VT team members found this especially helpful since they face different challenges compared to FtF teams (Andriessen & Vartiainen, 2006). Since VTs are often geographically dispersed, they can face cultural differences and language barriers. Thus, by taking some time and formulating a clear message, they can avoid misunderstandings.

On the other hand, participants emphasized that synchronous communication is favorable over asynchronous communication when solving a more complex problem or need to make an important decision. Further, the participants of this study believe that virtual FtF communication has less room for miscommunication because a connection between the voice and body language can be made. Based on empirical data, this can be especially important when discussing a complex topic, as the sender can use visual cues to analyze whether the receiver understood the purpose of the message or not. Based on the senders' judgments, s/he can confirm if the message was understood and, if not, provide the receiver with more information. This can be supported by Watzlawick and Beavin (1967) and Furnham and Petrova (2010), who argue that combining verbal and non-verbal communication channels can lead to richer communication. Further, studies found that virtual FtF communication enables teams to exchange and share valuable social, emotional, and contextual information via body language, tone of voice, and facial expression (Kiesler & Sproull, 1992; Warkentin, Sayeed & Hightower, 1997; Dubrovsky, Kiesler & Sethna, 1991).

Regarding the use of synchronous and asynchronous communication, the participants of this study tend to favor the two different types for different occasions. As mentioned above, the synchronous one was favorable when dealing with highly complex tasks. The empirical data showed that asynchronous ICT was favorable for quicker or more spontaneous communication, especially chats. Participants experienced receiving the quickest response from colleagues through a chat tool as everyone is almost always online. Another benefit they saw in using chat tools is adding emojis to a text message or reacting to a colleague's message with emojis. First, emojis can be seen as an example of non-verbal communication channels that add depth to the message that Watzlawick and Beavin (1967) and Furnham and Petrova (2010) talk about in their studies. Second, the reaction function of chat tools allows team members to react to a colleague's message. Based on the empirical data, it can be argued that emojis can be used to replace the missing non-verbal channel; the tone of voice. Matsumoto and Hwang (2013) mentioned that tone of voice is a non-verbal channel that helps clarify how a message should be interpreted. To carry the tone of voice can be challenging in a written message. Thus, by adding different emojis, participants try to emphasize the tone of a written message and how the receiver should read it. Emojis as reactions to messages can be used for task-oriented and social-oriented communication. Based on the empirical data, VTs used specific emojis to react to colleagues' messages. Those reactions might replace the small conversations or the small appreciation in a physical office. So it can be assumed that emojis and chat tools replace or supplement the interactions between team members that would typically happen if they would sit in the same office.

Another synchronous communication tool that participants mentioned was Virtual Reality (VR). The two participants who work with a VR tool prefer to use it for workshops or brainstorming sessions. They say that VR allows team members to interact in 3D, giving them the perception of being in the same physical room. Participants experience the session in VR to be more engaging, motivating, and productive. Additionally, the VR environment can help the participants use more communication channels such as body language and facial expressions. The recipient can also read the avatar's non-verbal communication, which adds depth and richness to the communication (Furnham & Petrova, 2010). Using VR in VT can be a way to both remove distance and make communication more enriched. Other researchers can further investigate how a VR tool can help a VT become high-performing.

Lastly, all participants mentioned that it is essential to have different ICT tools. However, to avoid misunderstandings or conflicts, it is also necessary to decide which tools should be used for which communication purposes in the team. This further implies that a member of a VT has to use different ICT depending on whether the purpose of the communication is more social or task-oriented. This is because the two different types of communication require different communication dimensions. For example, a socially-oriented communication aiming at building personal relationships may need to have more non-verbal cues than a conversation to check whether a task has been performed (Lin, Standing & Liu, 2018; Chang & Bordia, 2001). Therefore, a VT's ability to decide on an appropriate communication medium for different interactions and tasks is a critical concept for effective communication (Hovde, 2014). This is further supported by a study that showed that team members communicate more effectively with each other when they use a variety of communication tools (Kayworth & Leinder, 2000).

*Based on this, it is suggested that managers focus on setting up different ICT tools and, together with the team, decide which ICT is the best suited for the conversation purpose. This action is also supported by previous literature by Varhelahti (2017), Hovde (2014), and Kayworth and Leinder (2000). They suggest that VTs can choose the appropriate ICT tool from several options to communicate effectively.* It is also helpful if the manager ensures that ICT is available. This increases access to non-verbal communication channels. Since this can help build personal relationships, which in this study was shown to be essential for trust and further supported by the empirical data that if the members feel more trust, they are more likely to feel team cohesion both on a task-oriented as well as a social level.

## **6.2 Structure**

In this study, participants referred to structure as establishing transparent work processes. These enable the team to work cohesively since a mutual understanding of how specific tasks need to be solved is needed to achieve the common goals. It is argued that following the same steps can decrease confusion since each team member can comprehend the steps completed by others. Establishing transparent work processes was also associated with having a guideline on where and how to store information. This can be linked to what Korsgaard et al. (2010) refer to as shared mental models, which have strengthened coordination and, in return, increased team performance. Further, developing a mutual understanding of how to complete tasks can increase collaboration to achieve common goals (Marks, Zaccaro & Mathieu,

2000). Thus, it can be argued that developing shared mental models can help to strengthen the feeling of perceived task cohesion.

*Therefore we suggest that managers implement standardized work processes, for example, guidelines for meetings or specific checklists for projects. These can help teams to structure their work.* We argue that it is especially true for VT, who work together on the same project but across different time zones. As mentioned before, different time zones can decrease the opportunity to communicate (Powell, Piccoli & Ives, 2004). However, creating a shared knowledge structure can make it easier for team members to keep track of what one colleague was doing while the other was sleeping and continue to complete the task. We would also argue that this is an opportunity for task-oriented asynchronous communication, as guidelines or checklists can be a support to communicate up-to-date information about work-related tasks.

Participants pointed out another structure by defining clear team roles and task division. This can be supported by Lewis (2003). He emphasized that it is essential for VTs to have a clear understanding of the roles the colleagues are playing in the team and what task they are working on. This can increase the mutual understanding of why everyone is needed to achieve the overarching goal. On the one hand, this can strengthen a feeling of social cohesion, meaning that team members experience a more vital belonging to the team and want to interact with one another (Evans & Jarvis, 1980).

On the other hand, it may also help to develop task cohesion. According to the empirical data, participants felt that they needed to understand the tasks and roles of other group members to understand how they all contribute to achieving the common goals. If there is a structure regarding tasks and roles, it helps team members see how everyone contributes to the common goals. Furthermore, this can enhance collaboration (Li, Mao, Li & Zhou, 2002), which is an essential factor in becoming a high-performing team (Smith & Katzenbach, 2015). *To create shared mental models, a manager should provide the team with a clear overview of each team member's tasks and roles. This could be captured in a CRM, internal wiki, team organizational chart, or other platforms that are accessible to the entire team. To increase visibility across the organization and create an understanding of how each department contributes to business goals, a department's overarching team goals should be accessible and discussed across departments.* We believe that this is essential for VTs. Since

VTs do not work in the same physical space, the daily work activity of team members is less visible to colleagues (Kirkman et al., 2002). It is argued that the visibility of a team member's contribution to the overall goal can reinforce the impression that colleagues can rely on each other without actively monitoring each other's work. This can further increase cognitive-based trust in VTs and further collaboration (Galvin, McKnight & Ahuja, 2001). Furthermore, visibility can help team members reach out to the responsible person and avoid miscommunication.

The last-mentioned structure is related to the supportive and facilitating role of a manager. More precisely, for participants, it is essential that a manager is available for the team to ask questions and thus, support it in their day-to-day work. *We believe that this can be counteracted by regular virtual FtF-meetings in which the manager is available and offers support to the team. Furthermore, the manager also encourages the team members to help each other. This type of structure could help VTs perform their day-to-day work and achieve their current goals and objectives. Additionally, virtual FtF-meetings could also positively affect building trust in the team (Jarvenpaa et al., 1998). Therefore, we suggest that managers create jour fixed meetings.*

This is especially crucial for VTs because the physical distance between team members can result in a psychological distance which can lead to a less trusting relationship (Salisbury, Carte & Chidamvaram, 2006). Furthermore, little contact and being visually isolated can inhibit the development of personal relationships among virtual team members (Sivunen & Nordbäck, 2014; Handy, 1995). Therefore, it can be argued that having regular meetings where the whole team comes together can create opportunities for the team to decrease the psychological distance. Furthermore, a manager should encourage team members to ask questions and help one another. In return, this can lead to team members caring and being concerned for one another's well-being which can strengthen the affective-based trust (McAllister, 1995).

### **6.3 Trust**

Considering the data we collected from the participants' interviews, we realized that it was challenging for participants to provide their definition of trust. For example, some participants described trust based on actions that lead to trust in team members. Other participants pointed to behaviors that counteract building a trusting relationship. Again others

focused on what they need to build a trusting relationship with a colleague. Based on this, we identified the three sub-themes reliability, building personal relationships, and mutual trust (see *sections 5.2.1, 5.2.3, and 5.2.2*)

In our study, participants emphasized that team members must perform the tasks they have committed to in order to develop trust. This can be referred to as cognitive-based trust, which is a co-worker's perception of their colleague's competence, reliability, and dependability (Lewicki & Bunker, 1995; Mayer, Davis & Schoorman, 1995; McAllister, 1995). Furthermore, participants mentioned that having reliable colleagues could diminish stress since they could depend on them to complete the tasks. However, participants mentioned that trust could quickly decrease if colleagues did not live up to their expectations. This is in line with research emphasizing the fragility of cognitive-based trust (Mc Allister, 1995; Germain, 2011).

Furthermore, building personal relationships, including emotional bonds, was identified as crucial to developing a trustful relationship (see *section 5.2.1*). This can be referred to as affective-based trust (Lewicki & Bunker, 1995; McAllister, 1995; Sivunen & Nordbäck, 2014)

Although participants did not use the terms cognitive-based trust and affective-based trust in the interviews, they still referred to the core themes of both dimensions, being reliable and building a personal relationship. Based on the empirical data, developing cognitive-based trust and affective-based trust seems to be crucial for building a trusted relationship. As *Participant D* said, *"it is essential to have some sort of personal relationship... as well as not only focus on work-related relations but also have both work-related relationships and personal relationships"* (see *section 5.2.2*). Germain (2011) supports this assumption as he sees cognitive and affective-based trust as necessary to overcome challenges and develop into high-performing teams. *Based on the data and the literature, we see it as necessary that the manager dedicates time to planning team activities that are not work-related. These get-togethers should be a chance for team members to exchange personal information and establish emotional relationships.* This action is further supported by Mc Allister (1995). She states that even if it is challenging to build affective-based trust, it is essential to dedicate time to it to develop personal relationships. It is argued that social cohesion can also increase

by developing affective-based trust. If team members develop personal relationships, they are more likely to stay in the group because they feel attached (Evans & Jarvis, 1980).

Furthermore, developing affective-based trust can counteract the fragility of cognitive-based trust (Germain, 2011). Therefore, it is argued that focusing on non-work-related activities can help the team increase both affective-based trust and social-team cohesion. It can be argued that these activities are even more crucial for VTs since they lack spontaneous social communication or social activities such as taking a coffee that FtF-teams do on a daily basis.

Participants in this study also emphasized that mutual trust is essential for performing their job. Mutual trust should exist between colleagues. However, participants emphasized that it is even more essential to create mutual trust between the manager and the employee in a VT. The participants said that they are more likely to perform in their work if the manager trusts their ability to solve the assigned task and does not need to control and supervise their tasks. This further means that the manager provides employees with the freedom and flexibility to perform their work without full access to their exact mode of operation. It can be argued that this mutual trust between the manager and employee can be seen as cognitively-based mutual trust. This, since it is grounded in that the manager trusts the employees' competencies and sees them as reliable and dependable as well as that they do not have to control or monitor their work which aligned with the definition of cognitive-based trust (Lewicki & Bunker, 1995; McAllister, 1995; Mayer, Davis & Schoorman; 1995).

On the other hand, for a manager to provide the employee with flexibility, employees need to be reliable and deliver on their tasks in order for the manager to develop cognitive-based mutual trust towards the employees. *In order to strengthen mutual trust between managers and employees, we believe that one-to-one meetings can be a good initiative, as they provide an opportunity to foster personal bonds between the two.* Further, this is also a great opportunity for the manager to check in with employees to see if they are aligned with the task and offer help if needed. Those meetings are essential in a VT team since employees do not have the chance to meet the manager regularly in the office (Jarvenpaa et al., 1998).

Lastly, it can be argued that participants concentrated more on the importance of developing cognitive-based trust. They said that it is mainly cognitive-based trust that helps them perform their work. However, we argue that affective-based trust needs to be developed as it

allows team members to develop an emotional relationship with each other, strengthening cognitive-based trust and making it less vulnerable.

#### **6.4 Team cohesion**

Regarding the data we collected from the interviews, participants associated team cohesion with collaboration. Furthermore, they saw shared team goals and objectives necessary for team cohesion to emerge.

Considering the results from participants' and experts' interviews, both described that a common goal or mission is essential to create the feeling of team cohesion (see *sections 5.3.1 and 3.2*).

According to the data from experts and participants' interviews, establishing and following a clear team mission and goal creates a feeling of team cohesion. Thus, everyone works together and in the same direction to achieve the goal, creating team affiliation. The participants pointed out that creating a sense of cohesion is especially important in VTs, where employees never share a physical working space and are often geographically distributed. Further, participants argue that the physical distance makes it more difficult for employees to feel part of a team and focus on team goals rather than their individual tasks. According to participants, defining team goals and objectives help VTs to create awareness that all members are needed to achieve them in the best possible way. Based on the empirical data, we argue that participants focus strongly on the task dimension when referring to team cohesion since they argue that shared goals and objectives make people work closely together. They also argue that task cohesion strengthens collaboration because team members who have the same goal in mind are more likely to help and support each other. This connection could also be found in a study conducted by Shaw and Shaw (1962). They found that cohesive groups work more cooperatively and attain more agreements between team members. Participants also pointed out that collaboration is beneficial because team members' various skills and knowledge can be combined to achieve the overarching goal. Evans and Dion (1991); Gully et al. (1995); Mullen and Copper (1994) argue that this will, in return, increase team productivity and performance since employees have a common understanding of why every single team member is crucial to achieving the goal.



Based on the empirical data, it can be argued that social cohesion results from task cohesion. Team members that follow specific team goals and objectives which require diverse skills and knowledge are more likely to work with one another to achieve the goal. In turn, this could lead to a higher level of attachment among team members as they experience that they can accomplish more with strong collaboration than they can alone. Therefore, we conclude that task and social cohesion are essential for the participants to be a high-performing team. As mentioned before, this study focused on the two dimensions of team cohesion; social cohesion and task cohesion. Social cohesion refers to how team members feel attached and interact with each other. Task cohesion describes employees' commitment and willingness to achieve team goals (Li, Mao, Li & Zhou, 2021).

*Based on these findings, managers can increase team cohesion by following two actions. The first step would be to hold a workshop where the manager and team come together to develop overarching team goals and objectives.*

We believe that developing shared goals as a team will increase employees' motivation and commitment to achieve them. Furthermore, we argue that this action can be especially beneficial for VT. Establishing a shared goal could reduce the feeling of psychological distance as team members understand that everyone is needed to achieve it. This can lead to people feeling more attached to one another.

*As a second step, managers should schedule retrospective meetings where the team reflects upon the goals and objectives. This meeting should provide the team with time to discuss the strengths of the team, areas where they could improve, and possible aspects they would like to change or adjust to in the future.*

Furthermore, a space for reflection can give VT members time to communicate about both tasks and social topics. Furthermore, it can be argued that this can help the team develop more team cohesion and trust.

## **6.6 Actions to take in order to help VTs become high-performing**

Moving forward, we will discuss possible actions managers can take to develop a high-performing team by enabling effective communication, creating trust and team cohesion, and implementing structure. Since all four concepts are deeply intercorrelated, we will discuss only a single action. However, it is crucial to understand that all actions will

impact multiple concepts. Before moving to the actions, is it important to emphasize that it is not a guarantee that the outcome of an action will be the same for all VTs.

In the sections, we would like to present an overview of the actions already mentioned in *sections 6.1 and 6.4*. Although the actions presented emerge from a particular concept, we would like to emphasize that when realizing them in practice, each measure will impact several concepts. This arises because all concepts are strongly intercorrelated (see *section 6.5*). Additionally, it is challenging to direct one specific measure to a concept because they need to be seen in the context of the team. Since every team is unique, the same measure applied to two teams might impact different concepts. To investigate how the different actions impact the concepts are out of our study's scope but can be investigated in future research. In the following overview, we will not refer to a specific concept when presenting the actions since we firmly believe that they are all critical to building a high-performing team as they help enable effective communication, create trust and team cohesion, and implement structure.

Number	Actions	Detailed description	Importance for VTs
1	Set up different ICT tools and utilize the features	Section 6.1	The availability of different ICT tools can provide VTs with access to non-verbal communication channels. Non-verbal communication channels are important for developing personal relationships, trust, and team cohesion.
2	Team activities	Section 6.3	Taking time for team activities can help develop affective-based trust, and further social cohesion can also increase. If VT team members develop personal relationships, they are more likely to stay in the group because they feel attached to one another.
3	One-to-one meetings	Section 6.3	By having one-to-ones with the manager and

			employees can develop a deeper personal relationship. This can also help develop cognitive-based trust.
4	Developing team goals and objectives	Section 6.2	Developing shared goals as a team will increase employees' motivation and commitment to achieve them. Furthermore, it can be argued that this action can be especially beneficial for VT since establishing a shared goal could reduce the feeling of psychological distance as team members understand that everyone is needed to achieve it. This can lead to people feeling more attached to one another. So this action could have a positive effect on both task and social cohesion.
5	Retrospectives	Section 6.2	Furthermore, a space for reflection can give VT members time to communicate about both tasks and social topics. Furthermore, it can be argued that this can help the team to develop more team cohesion and trust.
6	Standardized work processes	Section 6.2	It can be argued that having standardized work processes is especially true for VT who work together on the same project but across different time zones. However, creating a shared knowledge structure can make it easier for team members to keep track of what one colleague was doing while the other was sleeping and continue to complete the task. This can then strengthen cognitive-based trust as well as task cohesion.

7	Team roles and tasks	Section 6.2	It is argued that the visibility of team member's contribution to the overall goal can reinforce the impression that colleagues can rely on each other without having to actively monitor each other's work. In return, this can increase cognitive-based trust in VTs and further strengthen collaboration (Galvin, McKnight & Ahuja, 2001). Furthermore, we argue that visibility can help team members to reach out to the responsible person and therefore avoid miscommunication.
8	Virtual team meetings	Section 6.2	VT can experience a feeling of psychological distance (Salisbury, Carte & Chidamvaram 2006). Further, being visually isolated can inhibit the development of personal relationships among virtual team members (Sivunen & Nordbäck, 2014; Handy, 1995). Therefore, we argue that by having regular meetings where the whole team comes together can create opportunities for the team to decrease the psychological distance. Furthermore, a manager should encourage team members to ask questions and help one another. In return, this can lead to team members caring and being concerned for one another's well-being which can strengthen the affective-based trust (McAllister, 1995).

Table 5: Actions for managers

Apart from the actions listed above, we identified one action an organization has to take for VTs to become high-performing: educating the managers. By this, we mean that the manager has to be prepared for the additional challenges of managing or leading virtual teams. For

example, they communicate only by using ICT tools, working across cultural differences, language barriers, and different time zones. We suggest organizations educate their managers on setting up engaging virtual meetings that involve all participants. Furthermore, managers should be educated on the different ICT tools, how to utilize them to their fullest purpose, and what features can make communication more effective. Since this is somewhat not included in our research scope, we suggest this as future topic research could investigate more thoroughly.

### **6.7 Research Limitation**

We believe that our sample is quite diverse, at least in terms of nationalities and profession, but one of the limitations of our study is how homogeneous the sample is in terms of age. This is since all participants in our study were in the age range of 24-34 years. This would have been an advantage if the study aimed to investigate how employees of virtual teams born in the 80s and 90s define effective communication, trust, team cohesion, and structure: to what extent do they consider that effective communication, trust, team cohesion, and structure contribute to the team's performance? However, since we were interested in the entire population of virtual teams, this is a limitation of our study.

Moreover, it would not be strange to conclude that employees born in that age group are also more familiar with ICT and its tools. Employees working in virtual teams born before the 1980s may have different experiences than the sample we interviewed. Our study may not be relevant to all managers leading virtual teams. Alternatively, at least it is relevant to understand that older team members of virtual teams might face different challenges than the ones in our sample. Furthermore, the sample in this study was not evenly distributed by gender: ten women were interviewed compared to only three men. This can, of course, be seen as a limitation. However, as all participants had reasonably coherent answers and looked at the concepts consistently, we do not see this as a significant limitation, but it is still worth mentioning.

One other limitation of our study regards the data collection. Since we investigated the participants' thoughts on the concepts in the current moment, there is a risk that they might have answered something else one other time. The thematic analysis will not necessarily yield the same results if the respondents were interviewed differently. Further, there is also a

risk that the collected result would have been different if we interviewed 13 other individuals included in the target population.

In addition, the interpretation of the data may also be a limitation of this study. This is because it is based on the subjective perceptions and understandings of the concepts that we had, which can damage the credibility of the results if the interpretation does not match the respondents' perceptions. This potential risk is essential for analyzing the results, especially for our drawn latent conclusions. We attempted to mitigate this risk by keeping our influence and interpretation of the data in mind; this may have reduced the risk of researcher bias. However, we cannot guarantee that two other researchers would have drawn the same conclusions as we did, as it is difficult to overturn our interpretation in the analysis. One advantage of the credibility is that the study was written by two people, allowing us to examine each other's opinions critically. Furthermore, it may be that if both interpret the material in the same way, this may indicate more substantial credibility. Nevertheless, the desire to reach a consensus may change our opinions over time due to each other's thoughts on the material.

## 7. Conclusion

In the middle of the 20th century, the nature of work changed. Work has become more cognitively demanding and complex, and organizations are becoming more diverse and flexible workplaces. Because of the internet and the increased variety of ICT tools, it is now possible to work in companies that operate in a different location from the employee. This has further led to a geographically distributed team. As a consequence, managers are facing new challenges to help their team become high-performing and deliver on the company's overarching goals. Based on this, the purpose of this study arises.

The purpose of this study was to develop actions managers should take to build high-performing VTs. In order to fulfill this purpose, the following research question was composed: *What actions should a manager take to build high-performing teams in a virtual setting?*

Based on the empirical data, this study identified actions a manager should take to enable the building of high-performing teams. The study identified four concepts that are crucial for building a high-performing virtual team; enabling effective communication, creating trust and team cohesion, and setting up structure. Thus, the actions that have been developed are designed to address those concepts. All actions can be found in *Table 5: Actions for Managers*. As mentioned before, all four concepts are highly interconnected (see *chapter 6*). This implies that one action has implications for multiple concepts. Furthermore, the recommended actions need to be seen in the context of the organization and the team. Hence, it is not possible to be certain that the possible outcome will be the same for all teams.

First of all, it can be concluded that VTs might not be as different as FtF teams, since all the identified and presented actions could help both types of teams to become high-performing. However, one main difference between VTs and FtF teams has been identified. Team members of VTs are geographically distributed which can lead to psychological distance and negatively affect the development of trust and team cohesion (Salisbury, Carte & Chidamvaram, 2006). Therefore, it can be argued that the actions presented are especially important for VTs as they can help to bridge the physical and psychological distance and thus bring team members closer together. Based on the empirical data of this study, we argue that structure and effective communication are the main driving forces in decreasing

psychological distance between team members. In return, this can help VTs build trust and team cohesion.

We could see that setting up a structure can enable effective communication and create trust and team cohesion in a VT. Firstly, a manager should provide the VT with a clear overview of every team member's tasks and specializations. This can facilitate communication between team members because they know which co-workers they should contact regarding specific tasks and projects. Furthermore, it can also decrease the risk of miscommunication and conflict.

Furthermore, it could be argued that standardized processes (*see section 5.4.1*) such as regular virtual FtF meetings would help the team to communicate more effectively. Since it has been shown that fixed VT meetings could reduce the feeling of both physical and psychological distance which further could lead to the team increasing trust and team cohesion (Jarvenpaa, Knoll & Leidner, 1998; Varhelahti & Turnquist, 2021). Establishing trust and tight social bonds between team members make them more likely to communicate with one another. Communication can either develop social relationships further or solve tasks and therefore the overarching team goals.

We could see that effective communication enables team members to create trust and team cohesion. Based on the empirical data, it can be argued that today's ICT tools enable team members to make use of verbal and non-verbal conversation channels which enriches the conversations to a great extent. This being said, it is important to offer a variety of asynchronous and synchronous ICT tools and utilize the different features available. Synchronous ICT tools provide team members with the opportunity to share social, and emotional information via body language, tone of voice, and facial expression (Kiesler & Sproull, 1992; Warkentin, Sayeed & Hightower, 1997; Dubrovsky, Kiesler & Sethna, 1991). These non-verbal communication channels are important for social-oriented communication which has been shown to be important for developing personal relationships, trust, and team cohesion in VTs (Lin, Standing & Liu, 2018). The features of today's asynchronous ICT tools have been shown to mitigate the lack of the non-verbal communication tone of voice through symbols. Based on the empirical data, by utilizing emojis in a text message, participants try to emphasize the tone of a written message and how the receiver should read it. Furthermore, the reaction feature emojis were also seen as a way to replace the little interactions



The reaction functions available in the most common asynchronous ICT tool, such as slack or teams, were used by the participants in this study as a complement to the spontaneous reactions to a comment/conversation or a spontaneous appreciation that normally take place in the physical office. Therefore, the communication that takes place through an ICT tool is not too different from a normal face-to-face conversation, since the variety of all different communications is possible to achieve through today's ICT tools.

In conclusion, this study provided data on employees' perceptions of the four concepts of effective communication, trust, team cohesion, and structure. The authors hope that the results of the study will raise awareness of the importance of these concepts as they are essential to building a high-performing team. The actions identified can be used in VTs and FtF teams. This means that the two types of teams are not that different in terms of the actions that should be taken to develop a high-performing team. It can be argued that VTs can benefit to a great extent from the development of ICT tools, as long as they are utilized to their fullest extent. The authors of this study, suggest managers of VTs inform themselves regularly about ICT tools and their functions as they have been shown to provide virtual team members with the opportunity to decrease the psychological distance.

## **7.2 Further research**

This study has investigated what actions managers of virtual teams should take in order to help their team become high-performing. To do this four concepts (i.e. effective communication, trust, team cohesion, and structure) were chosen as they have been shown to be essential for building high-performing VTs. The chance that other concepts enable VTs to become high-performing is high. Therefore it could be of interest to investigate which other concepts are relevant. Moreover, this study concluded that structure and communication enable VTs to build trust and team cohesion. Further research can thoroughly investigate if those two concepts are actual enablers for VTs to become high-performing. Further research should also investigate what VTs themselves can do to become high-performing.

Finally, it can be further investigated if the conclusion drawn by this study is true. Thus, it could be investigated if VTs are actually not as distinct from FtF teams as sometimes assumes due to the extended ICT tools.

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# Appendix

## Appendix A: Form To Participants To Sign Up To The Study

\*Obligatorisk

Are you  
working in a  
virtual team?  
Sign up for  
participating  
in a research  
study!

Are you working in a virtual team? Sign up for participating in a research study!

Are you working in a virtual team?

As part of our Master's thesis in Management at Lund University School of Economics and Management, we are looking for individuals who currently work in a team in a virtual work environment, meaning that you and your colleagues are geographically distributed, and work over different time zones, long-distance and/or other organizational boundaries.

For this purpose, we would like to conduct short live or online interviews, approximately 45-60 minutes, to get an insight into your experiences and insights.

Ethical considerations

Complete confidentiality is guaranteed regarding participants' personal information and the answers. There will be no possibility to connect the answers to the participant since all the participants will be anonymized. Participation is voluntary. During the interview, the participant has all rights to end it whenever, and no questions are mandatory to answer.

Please feel free to contact us if you have any future questions.

Email:

[jo4012fl-s@student.lu.se](mailto:jo4012fl-s@student.lu.se)

[annedealmeida1995@gmail.com](mailto:annedealmeida1995@gmail.com)

LinkedIn:

Anne de almeida

Josefin Flomén

Thank you!

1. Would you be able to participate in a live or online interview, between the 20th of April - 6th of May?

*Markera endast en oval.*

Yes

No

2. Are you working in a virtual team? \*

*Markera endast en oval.*

- Yes, I'm working virtually in a virtual team
- No, I'm not working in a virtual team

3. Do you have colleagues that are not working from the same location as you? \*

*Markera endast en oval.*

- Yes
- No

4. Are your employers providing you with a physical workspace (office or desk-landscapes)? \*

*Markera endast en oval.*

- Yes
- No

5. How often do you meet your colleagues? \*

*Markera endast en oval.*

- Never
- Less than 3 times a year
- 2-4 times a year
- Every month
- Once a week
- More than once a week

6. Please enter your contact information: E-mail or linkedIn so we can get in contact with :) \*

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THANK YOU!

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Det här innehållet har varken skapats eller godkänts av Google.

Google Formulär

## Appendix B: Interview Guide For Participants

### INTRO

1. Before we start, how are you?
2. Do you have any questions for us?
3. Could you tell us a bit more about yourself (age, current position, nationality, for how long have you worked virtually)?'

### TRUST

4. How would you define trust in a virtual work context?
5. In your opinion, do you think trust is a key factor in order to build a high-performing virtual team? And why?
6. What do you need from a colleague to build a trusting relationship?
7. What actions do you take to build a trusting relationship with a colleague (virtual context)?
8. Did you ever experience a situation in which you trusted a colleague and distrusted another one, can you explain the main differences between those working relationships?

### TEAM COHESION

9. How would you define team cohesion in a work context?
10. In your opinion, do you think team cohesion is a key factor in order to build a high-performing team? And why?
11. What activities do you suggest a virtual team to take, in order to create team cohesion?

### EFFECTIVE COMMUNICATION

12. What do you understand by effective communication?
13. In your opinion, do you think effective communication is a key factor in order to build a high-performing team? And why?
14. How do you communicate with your colleagues?
15. What do you do to ensure you communicate effectively with your colleagues?
16. Describe a typical virtual meeting (microphone on/off, webcam on/off, etc.)

### STRUCTURE

17. What role do you think structure plays in becoming a high-performing team?
18. Can you describe specific structures, policies, and guidelines that your manager set up for your team?
19. Do you have a general understanding of what your colleagues are working on and what responsibilities they have?
20. What do you think is needed to build a high virtual performing team
21. Do you have any other actions managers can take to help the team become high performing

## Appendix C: Mail To The Experts

**Hi,**

As part of our Master Thesis, we, Josefin and Anne, investigate the challenges that managers face when working with remote teams. More precisely; building trust and moving from swift trust to affective trust, enabling clear communication (verbal and non-verbal) among team members, and creating team cohesion (move away from the individual to collective achievements). We are focusing on these three factors as they have been shown to directly affect team performance. To gather data we will conduct semi-structured interviews with employees as we would like to get their insight and experience on the topic, e.g. are they facing these challenges and what has been done to overcome them.

Additionally, we would like to interview experts who advise managers and companies on how challenges in remote work can be tackled. Receiving rich data from experts and from employees will give us insights into how well-known practices are among companies. Furthermore, comparing data will give us an idea of how widely spread the practices are and if companies and/or managers put them into practice.

We would like to ask you if you would be willing to participate in our research and if we could interview you regarding the challenges (i.e., building trust, clear communication, and team cohesion) remote teams face and best practices for companies and managers to overcome those.

The answers will be complete confidentiality, and confidentiality is guaranteed regarding experts personal information and the answers. There will be no possibility to connect the answers to the expert since all the experts will be anonymized.

Participation is voluntary. During the interview, the expert has all rights to end it whenever, and no questions are mandatory to answer.

Thank you very much!

We wish you an amazing day!

Best regards

**Josefin and Anne**



**Appendix D: Interview Guide For The Experts**

1. In your opinion do you think trust is one aspect of building a high-performing team?  
And why?
2. In your opinion do you think communication is one aspect of building a high-performing team?  
And why?
3. In your opinion do you think team cohesion is one aspect of building a high-performing team?
4. Do you distinguish between task cohesion and social cohesion and do you think o  
And why?
5. What do you think are the biggest differences between virtual teams and face-to-face teams in general?
6. What do you think are the biggest differences between virtual teams and face-to-face teams regarding the mentioned factors?
7. What are the main reasons companies reach out for your advice/consultancy?
8. Do companies consult you for exactly the mentioned challenges or do they consult you for different reasons and you identify the challenges as underlying factors of those?
9. Do you see the mentioned challenges as being more often in virtual teams than in face-to-face teams?  
Do you think they are more crucial in virtual teams
10. When consulting a team, do you approach virtual teams differently from a face-to-face team?  
- How  
- Why
11. What are hands-on practices you advise virtual teams to follow in order to build trust, establish effective communication, and team cohesion?
12. Are there special practices / tools you advise managers to follow in order to build trust, establish effective communication, and team cohesion?
13. From your experience do you identify other factors which are highly important to developing a high-performing team?