



Vaasan yliopisto
UNIVERSITY OF VAASA

Thamali Elayadurage

**Opening the black box: Challenges and the
management of cross-cultural virtual project teams
in international projects**

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Author:	Thamali Elayadurage		
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Supervisor:	Prof. Tahir Ali		
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ABSTRACT:

Corporations expand their operations beyond the home country borders to gain access to new markets and acquire global talents and resources. International projects are undertaken in such organisations for implementation of various strategic and operational initiatives. When the project teams span beyond country borders the only way to connect with team members will be via virtual means. Team members of such teams will consist of people from various nationalities with different cultural backgrounds. This study is conducted to identify the challenges faced by the managers of such cross-cultural virtual teams (CCVTs) in international projects and to explore the best practices in managing CCVTs.

The research modal of this study is developed after reviewing previous literature on CCVT challenges and management. The study is conducted as a deductive research. The data collection was done by interviewing eight interviewees who are managing CCVTs in five international Finnish corporations. All the interviewees manage teams which are geographically dispersed across multiple countries, connecting via virtual means and composed of team members from various national and cultural backgrounds. The interview questions were designed to understand the challenges the interviewees face in managing their respective CCVTs and strategies/mechanisms they use to tackle the challenges. The research modal is validated using the empirical data collected using these qualitative interviews.

After the empirical data analysis it is deduced that empathy, effective communication, addressing elements of motivation and collaborative conflict resolution strategies help reducing overall challenges of communication, frequency of conflicts, and motivation issues in CCVTs.

The study identifies that it is important for CCVT managers to be culturally empathetic and have openness to learn about cultural differences specially related to communication, way of work and motivation. That would help connecting with team members and better management of CCVTs. CCVTs have frequent and higher rate of virtual meetings. Therefore systematic management of virtual meetings is essential to make the meetings fruitful. Collaborative conflict resolution strategy is identified as most used strategy for conflict resolution of CCVTs. It is also identified that CCVTs who have worked together for longer periods and/or have met physically during some instances have developed greater team bonds comparatively.

KEYWORDS: (Cross-cultural, Virtual, Team Work, International Projects, Challenges, Best Practices).

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1 Introduction

1.1 Background of the study

Organisations increasingly seek for global expansions to gain wider geographic reach and to attract new stakeholders (Koster, 2010, p. 37). The modern trends of work has lead the organisations break traditional departmental barriers and to structure work around projects (Baptista, 2022). The rapid growth of information technology and support tools resulted adoption of new models of work which are based on virtual team work which is flexible and adaptive (Baptista, 2022). This trend was also accelerated by COVID-19 global pandemic.

The author's interest in this topic is generated from working in cross-cultural information technology projects during past decade. The author personally experienced expansion of cross cultural virtual team work throughout this period. During the COVID-19 pandemic there was a rapid shift to virtual team work and afterwards it got normalised. Many organisations now provide full or partial remote work option and employees increasingly prefer hybrid style of working.

According to Cagiltay et al. (2015), Oertig and Buergi (2006) and Youssef et.al (2002) despite the popularity of cross-cultural virtual teams, there is very limited understanding of challenges faced in cross-cultural virtual teams and factors affecting the efficient management of cross-cultural virtual teams. Furthermore, Cagiltay et al. (2015) emphasise that socio-cultural aspects of virtual environment is more important and essential factor in constituting cyber space even though it receives much less attention compared to technological aspects. Hence, this research intends to increase understanding of challenges faced in cross-cultural virtual teams and factors effecting the efficient management of cross-cultural virtual teams in the context of international projects.

This research is to be conducted as an exploratory study. An exploratory study is a valuable means of finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (Robson, 2002). It is useful if you wish to clarify your understanding of a problem. Also according to Saunders et al. (2007), when conducting an exploratory study, a researcher must be willing to change the direction as a result of new data that could appear and new insights that could occur.

1.2 Research question and objectives of the study

The previous discussion steers the course of present thesis. The main objective of this thesis is to investigate the challenges project leaders face while managing cross-cultural virtual teams (CCVTs) and explore the optimal solutions/practices for managing these challenges in the context of international projects (IPs). Accordingly, the main research question of this thesis is:

What challenges do the project leaders face while managing the cross-cultural virtual teams (CCVTs), and how do project leaders overcome those in international project (IPs)?

This research question is further broken down into following five sub-objectives to better understand and answer the main research question:

- (1) To study the conceptualization, characteristics, and types of IPs***
- (2) To increase understanding of the conceptualization, structure, characteristics, and advantages (or reasons) of CCVTs***
- (3) To explore the challenges which project leaders face while managing CCVTs***
- (4) To explore the optimal solutions which project leaders use for managing these challenges in the context of IPs.***
- (5) To empirically investigate the challenges project leaders of CCVTs face, and the optimal solutions they use for managing these challenges in the context of IPs.***

1.3 Delimitations of the study

The present thesis investigates the challenges faced in cross-cultural virtual teams and factors effecting the efficient management of cross-cultural virtual teams in the context of international project operations. So, the focus or scope is limited to cross-cultural virtual teams, and to the context of international projects. This delimitation is essential because key challenges and their management might be different in cross-cultural virtual teams vs. cross-cultural face-to-face teams, and in the context of international projects vs. domestic projects. Further, data for this study to be collected by conducting a series of semi structured interviews. The data collection process to be limited by the number of interviews which could be conducted within a limited time frame and the number of interviewees who could be qualified for the interviews based on the set criterion. To have a sufficient amount of data for the analysis, it is intended to conduct minimum eight interviews.

Also interviews to be conducted with the employees working in Finnish or Finland based international companies. Therefore data and results will represent predominantly Finland based international projects.

1.4 Definitions of the key terms

The key terms used in this thesis are defined below:

CCVT: A cross cultural virtual team (CCVT) is a group of people with different cultural backgrounds who work together to attain a common goal, having at least one team member geographically dispersed resulting communication and corporation to be done via electronic tools (Cagiltay et al., 2015; Arora et al., 2019).

Project: “a project is a temporary endeavour undertaken to create a unique product, service or result” (Project Management Institute, 2021). A project has a team, a financial budget, a time plan and a set of goals the team needs to attain. Each project is distinctive

and differs from day to day operational tasks of an organisation. A project would reach its closure once the project goal(s) is achieved (Project Management Institute, 2021).

Project leader and manager: People who are leading projects can be identified as project professionals or project leaders. Project leads are given the responsibility to ensure that a project team will attain the set goals of a project (Project Management Institute, 2021).

IP: International project (IP) is a project which expands beyond national boundaries with regards to the project objectives or the nationality of the project stakeholders involved. (Koster, 2010, p. 35). International projects are usually multicultural as such project involve various “national, organizational or functional” cultures (Koster, 2010, p. 35).

International management: First and foremost it is important to distinguish between international management and cross-cultural management. Bird and Mendenhall (2016) describes international management as “incorporating international strategy, international human resources, and all other aspects of managing internationally and at all levels of analysis” in its broadest classification.

Cross-cultural management: According to Bird and Mendenhall (2016) cross-cultural management generally refers to “accommodating differences in cultural practices when managing outside of one's home country and it often takes a comparative perspective”.

According to Adler (1983), cross-cultural management is the investigation of how individuals behave in settings across cultures and countries. The goal of cross-cultural management is to compare organisational behaviour across countries and cultures as well as to describe organisational behaviour within countries and cultures (Adler, 1983). Most significantly, it emphasises the interactions between the various nationalities employed by the same company or in the same working environment (Adler, 1983).

1.5 Previous studies

Oertig and Buergi (2006) studied challenges faced by project leaders who are managing cross-cultural virtual project teams. In the empirical study of Oertig and Buergi (2006), the authors investigated ABC multinational headquartered in Switzerland which consists of geographically distributed project teams which are mainly based in Switzerland, USA and Japan. The authors interviewed six project leaders, six project managers, two former project leaders of ABC to investigate the main challenges faced by them in the CCVT setting and how they managed those challenges.

Oertig and Buergi (2006, p.29) identified key factors which should be given attention with regards to managing cross-cultural virtual project teams within a matrix organisation. According to Oertig and Buergi (2006, p.29) it is important to select leaders with a cooperative leadership style and outstanding communication abilities. Furthermore, authors suggest that leaders in matrix organisations are required to possess the ability to “lead by influence” rather than exercising command. Those leaders need to have the ability to handle personality matters, the operational and cultural thinking patterns of the team members and continuously find new ways to communicate across time zones and work surpassing geographical challenges (Oertig & Buergi, 2006, p.29).

According to Oertig and Buergi (2006, pg.29) the trend towards increasing use of technology supports efficiency and cost effectiveness. However it comes with prices. Therefore the authors recommend top management to keep supporting physical communication and relationship building. Furthermore Oertig and Buergi (2006, pg.29) highlights the value of investing in “language and intercultural communication training”. This type of training is especially applicable for fresh members of project teams working across different continents, to “reduce potential distrust”, and enable teams to fit together quickly and work efficiently.

Information and communication tools offer great opportunities for teams to connect and collaborate globally. However Cagiltay et al. (2015) states that such collaboration is

challenging when team members come from various cultural and socio-political backgrounds. Therefore according to the researchers such collaborative work will only be productive if there is pre-preparation to address the potential problems which could arise due to cultural differences and facilitators and managers of virtual teams have the responsibility of creating healthy team work settings.

Baptista (2022) investigated the key challenges concerning cross cultural virtual teams and presented a set of best practises which could be applied to CCVTs. The author states that the impersonal nature of virtual relationships and intra group cultural differences are the main challenges of managing CCVTs.

Table 1. Prior studies on management of cross-cultural virtual project teams in international project operations

Studies	Nature of study	Methodology and sample size	Findings
Oertig & Buergi (2006)	Empirical	Case study – Qualitative	<u>Challenges:</u> leadership challenges, virtual nature of communication, trust development, task management, people management, management of language and cultural matters, management of matrix
Cagiltay et al. (2015)	Empirical	Qualitative	<u>Solutions:</u> Acceptance of cultural differences, addressing cultural basis of motivation, communication management, using conflict resolution strategies, usage of appropriate ICT media, design of culturally sensitive media

Baptista (2022)	Empirical	Qualitative	<p><u>Challenges:</u> social isolation, lesser opportunity for social capital development, communication problems, reduced synergy among team members, technology costs, securing data, role ambiguity, overloading or roles</p> <p><u>Solutions:</u> education and training on cultural differences, choose team members who show intercultural competency, proactive leadership to minimise cultural conflict,</p>
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1.6 Structure of the study

This thesis is structured in to five main chapters. The chapter 1 introduction mentions the background to the study. The research questions and objectives are stated in this chapter. Furthermore the chapter includes the delimitations of the study, definition of key terms and a summary of the main previous studies referred.

The chapter 2 consists of the current state of the literature on the cross cultural virtual team management. It starts with conceptualisation of international projects and understanding their characteristics and types. Then the conceptualisation of the CCVTs is done. The characteristics and reasons behind CCVTs is identified from the literature review are explained. Furthermore challenges in managing CCVTs and optimal solutions identified through literature are explained which lays the foundation for model of the study.

The chapter 3 covers the research methodology used. It covers research approach, research method and research strategy utilised. Furthermore the chapter elaborates the data collection and analysis techniques utilised. Data collection is done via semi structured qualitative interviews. The chapter also explains the validity and reliability concepts with regards to qualitative research method.

The chapter 4 includes the empirical findings of the research data collection and analysis. It elaborates Interviewees' backgrounds, company backgrounds, characteristics, challenges and optimal solutions for managing CCVTs in investigated cases and cross-case analysis.

The chapter 5 consists of conclusions and recommendations. It includes a summary of the key empirical findings, validation of the theoretical framework and research propositions, managerial implications. Also it describes directions for future research and limitations of the study.

2 Literature Review

The literature review chapter begins by defining international projects (IPs) and discusses different types of IPs. Next, it conceptualizes the cross-cultural virtual teams and briefly discusses the characteristics and advantages of cross-cultural virtual teams. Subsequently, this chapter sheds lights on challenges in managing cross-cultural virtual teams, and potential mechanisms projects leaders use in managing these challenges. Finally, this chapter presents the conceptual model of this study.

2.1 International projects

2.1.1 Conceptualization of International Projects (IPs)

According to Koster (2010, p. 35) international projects expands beyond national boundaries with regards to the project objectives or the nationality of the project stakeholders involved. Furthermore, author states that global projects could involve entire world and this is a subset of international projects. International projects are usually multicultural as such project involve various “national, organizational or functional” cultures (Koster, 2010, p. 35). Due to the geographically dispersed nature of project stakeholders, virtual teams are commonly included in international projects (Koster, 2010, p. 35).

When compared the “nature of the organisation, industry, location in the value chain and duration”, international projects are not very distinct from standard projects. However there are apparent difference between the two types with regards to the “project purposes, scope, key stakeholders and the risk intensity” (Koster, 2010, p. 35-36). The project management tools and techniques which are applied to standard projects are applicable to international projects as-well. However higher level of discipline and special skills are required to manage international projects (Koster, 2010, p. 35-36).

Organisations seek for global expansions to gain wider geographic reach and to draw new stakeholders (Koster, 2010, p. 37). Gaining or extending global market share, enhancing global effectiveness, cost reduction, accessing some unique resources and reducing risks are also other purposes behind IPs (Koster, 2010, p. 37).

According to Koster (2010, p. 38) the scope of an International project spans beyond the home market of an organization. As an example several entities of the same organization from different countries could be involved. Involvement of these entities in the project have strategic importance and could be highly visible within an organization (Koster, 2010, p. 38).

2.1.2 Characteristics of International Projects

High complexity

According to Koster (2010, p. 40) an international project has multiple-interdependencies. Author states that such projects have stakeholders located in different entities of an organization who could potentially have interdependent interactions and conflicting interests. Also these stakeholders are geographically scattered leading to high complexity in communication (Koster, 2010, p. 40). Due to this the organization and the project managers needs to figure out and set up a suitable structure and a system to handle the inherent complexity of the project (Koster, 2010, p. 40)

High risk

IPs have higher risk intensity compared to standard projects (Koster, 2010, p. 38). The difficulty in analysing the complexity of the international environment, unpredictable changes which could realize at the execution of the project contribute to high risk intensity (Koster, 2010, p. 38). Complexity increases with the increase of stakeholder numbers and organizational set up (Koster, 2010, p. 38).

International projects are prone to budget and time overruns. Though this is not unusual in standard projects as-well, international projects possess higher uncertainty due to their higher level of complexity (Koster, 2010, p. 41)

Uniqueness

While each project is unique, international projects do have unique purposes. The contexts the projects operate, organizations and the countries involved will make such projects unique (Koster, 2010, p. 41)

Diversity

International projects consist of diverse stakeholder groups. Koster (2010, p. 41-42) states that project managers of international projects should be aware of the fact that various national cultures could create a pervasive impact on the project throughout the whole project life cycle. Therefore attention needs to be paid for bridging and efficient management of cultural differences in international projects (Koster, 2010, p. 42).

Compared to standard projects international projects usually consists of “non-domestic-stakeholders” with “heterogeneous nationalities”, especially among the customers (Koster, 2010, p. 38). As the projects with international collaborations are increasing, involvement of third parties outside of the organization is also tend to increase (Koster, 2010, p. 38).

Dynamics

International projects tend to face various unanticipated changes due to extreme competition in international markets and the various stakeholders involved with unobvious self-interests (Koster, 2010, p. 42). The dynamic nature of the international environment offers various risks and opportunities which needs to be responded swiftly (Koster, 2010, p. 42).

As an international project has a bigger scope it needs a higher level of resources for execution (Koster, 2010, p.42). Planning of such a project consume more time and higher cost involved with logistics and coordination. Also it would need project employees with relevant intercultural and language skills (Koster, 2010, p.42).

2.1.3 Types of International Projects

Farag (2021) broadly categorises projects into three categories namely, “strategic”, “operational” and “compliance”.

As Farag (2021) describes strategic projects involves creating an innovative product or a service or opening a new part of the organisation. Such projects enable an organization to obtain a competitive edge over its rivals. Furthermore, operational projects supports to enhance existing operations. These projects will contribute to cost reduction, efficiency gains and quality improvements. Compliance projects are required to be done to meet industry or government regulations or standards and often the organisation might not have a choice about implementing it (Farag, 2021).

2.2 Cross-cultural virtual teams

2.2.1 Conceptualization and structure of CCVTs

A virtual team is a group of workers who are distributed based on the geographical location, organisational setting and/or time zone and connected to each other by information and telecommunication technologies to attain organisational assignments (Powell et al., 2004, p.7).

A cross cultural virtual team (CCVT) is a group of people with different cultural backgrounds who work together to attain a common goal, having at least one team member geographically dispersed resulting communication and corporation to be done via electronic tools (Cagiltay et al., 2015; Arora et al., 2019).

A cross cultural virtual team (CCVT) consists of project team members physically located in two or more countries and use technology for their regular communication instead of using face-to-face means (Anawati & Craig, 2006, p.1).

2.2.2 Characteristics of CCVTs

A multicultural team is a team which consists of team members from dissimilar cultural backgrounds who have lived their formative years of life in different countries (Hofstede et al., 1997). As a result they have learnt “different values, demeanours, and languages” (Humbrick et al., 1998).

When virtual aspect is added to such multi-cultural teams it needs to signify that the team does not have the opportunity of face to face interaction or communication among team members and such teams completely depend on computer assisted working tools such as email, chat applications and digital discussion forums (Cagiltay et al., 2015, p. 2). Despite the fact that multicultural virtual teams are spread around the world, current developments of technology enables them to function together (Cagiltay et al., 2015, p. 2).

As the cross cultural teams bring together people from various cultural backgrounds with significance it makes such teams special (Baptista, 2022, p. 2). As a result of such teams, organisations face challenge in providing effective structures and management skills to cater the needs of such teams which may not require for mono-cultural teams (Baptista, 2022, p. 2)

2.2.3 Advantages (or reasons) of CCVTs

According to Oertig and Buergi (2006) the nature of project team work has faced many changes as a result of globalisation. International companies increasingly have projects

which span across various nationalities and time zones in geographically distant locations. Such project teams work in distributed settings within matrix organisations (Oertig & Buergi, 2006).

The cross-cultural aspect can no longer be avoided in contemporary organisations (Matveev & Milter, 2004). Moreover, when people with diverse cultural backgrounds collaborate it could generate creativity, innovative ideas and new ways of problem resolution (Ochieng & Price, 2009).

In multicultural teams, each team member offer their distinctive experiences and capabilities to the team making it a powerful way of working. When such cross-cultural differences are offered by individuals for synergy instead of making it causal for division, it strengthens the resourcefulness of the team (Harris & Moran, 1996). Youssef et al. (2022) mention that CCVTs use Information and communication technology to coordinate tasks and therefore CCVTs provide economic benefit by lowering the expense of travel, accommodation, daily allowance, relocation time, and unnecessary meetings.

2.3 Challenges in managing CCVTs in IPs

2.3.1 Communication

Academic studies have reported that cultural differences could generate challenges for virtual team members with regards to effective communication (Kayworth & Leidner, 2000; Sarker & Sahay, 2002). Communication via computer based tools have limitations as it lacks “prosodic features” and “paralinguistic aspects” of communication such as rhythm, tone, pitch and stress which is used for emphasis of in verbal communication. Also virtual communication may lack non-verbal aspects of communication such as body language, facial expressions and gestures which would be appreciated in face to face communication. (Kim, et al., 2007, p.338; Vignovic & Thompson, 2010).

The study of Meyerson et al. (1996) shows the importance of face to face meetings in the technological age which helps to promote the development of rapid trust among team members.

2.3.2 Technology

According to Ahuja (2010) virtual teams have an ultimate reliance on technology and the key challenge is the users' level of awareness on how to use technology. If a team does not have adequate knowledge in using the technology the team's performance will be low. Furthermore the author states that virtual teams would be successful only if the technology being used is user friendly.

According to Kumar and Bjorn-Andersen (1990, p.535) information systems have inbuilt value biases which indicate the inherent values of the culture in which those systems are developed. Consequently, there could be different levels of preferences and acceptance rates for certain tools and technologies in different cultures, which could lead to negative results as disastrous as failure of the project. As example style of information processing (verbal vs. analytics, linear vs. concurrent, visual vs. holistic) and prominence given to pieces of information could vary across cultures. Therefore the degree of satisfaction towards various information systems could vary between different cultures (Wilson, 2001).

2.3.3 Conflicts

According to Cagiltay et al. (2015, p. 7) the values, norms and code of social interactions originating from one's own culture is programmed to a person's mind. Therefore according to the authors people tend to assess the behaviour of others outside of their own culture according to the belief system they have inherited from their culture. This could lead to conflicting situations in cross cultural team settings either their located in the same location or virtually connected if they come across differences in values, perceptions, communication styles and opinions (Cagiltay et al., 2015, p.7).

Cultural meanings affect an individual's level of tolerance for situations based on which an individual may interpret situations as conflicts or threats (Paletz et al. 2014). When a team is formed from members belonging to various cultures, the possibility of experiencing cultural clashes is very high as such tolerances could differ among cultures (Paletz et al. 2014).

According to Staples & Zhao (2006, p.392) in cross-cultural teams, team members may have different ideas about values and expectations regarding communication and interaction patterns with others which springs from their varied cultural backgrounds. Authors state that this could cause conflicts especially when the diversity comprise of people in the individualism vs. collectivism realm. In such teams some would be willing to collaborate and commit for the overall team work and some will not have the same willingness (Staples & Zhao, 2006, p.392)

When it comes to communication, virtual communication differ from face-to-face interactions due to the absence of social cues and emotions such as body language and facial expressions (Vignovic & Thompson, 2010). Since social norms and standards which applies to physical interactions may not be available in virtual interactions, such environments can lead team members into unintended conflicts (Vignovic & Thompson, 2010).

2.3.4 Motivation

Motivation factors differ from culture to culture. A motivating factor which applies to a person from one culture may not be applicable to a person from a different culture. According to Lucas, et al. (2000, p.458), in collectivist cultures social interactions could possibly be motivated by "norms and responsibilities" instead of willingness for "fun and enjoyment". Wilson (2001, p.458) describes that in individualistic cultures motivation is derived from personal satisfaction and the competition among each other.

Virtual team members work on non-traditional work schedules and perform self-organisation of their work. Hence such individuals require space, trust, open communication and flexibility (Orsini & Rodrigues, 2020, p.2). It is important that team leaders ensure that each team member has a sense of ownership regarding their individual tasks and choice towards how those are done (Orsini & Rodrigues, 2020, p.2). Also when teams are exerting effort to embrace virtual working style the leadership style of the team leaders needs to especially consider the psychological needs of the team members to encourage individual motivation towards work and commitment for the job (Orsini & Rodrigues, 2020, p.2).

2.4 Optimal solutions (mechanisms) for managing challenges in CCVTs.

In this section, five optimal solutions for addressing the management challenges of CCVTs are discussed. The first solution proposed is acceptance of cultural differences and educating the CCVTs on same to help develop cross cultural awareness/empathy. The second solution proposed is to have systematic management practices in place to have team communication optimally. The third solution proposed is to understand the individual motivational factors and address these. The fourth solution proposed is training the team leads. The fifth and the final solution proposed is to have conflict resolution strategies in place.

2.4.1 Acceptance and education on cultural differences

According to Pauleen and Yoong (2001, p. 215-217) “cultural tolerance and empathy” are fundamental prerequisites for open communication and cross-cultural teams need more culturally suitable, rigorous relationship building strategies. Furthermore, if team members cultural reasoning behind of others’ varying beliefs they would work together effectively (Connaughton & Shuffler, 2007, p.396). Providing a cultural orientation session for the team at the beginning of the project and allowing the team to learn about each other would be a powerful strategy in managing CCVTs (Cagiltay et al., 2015, p.2). Based on this, following proposition is developed:

Proposition 1: Cross-cultural awareness/empathy reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

2.4.2 Communication Management

Cagiltay et al. (2015, p. 10) state that, while communication and interaction is a main success factor for virtual team work, in cross-cultural settings it is not correct to conclude more communication and interaction is always better than less for team success. Furthermore research suggest that frequency and complexity of team communication need to be managed by the facilitators of the virtual teams (Collins & Remmers, 1997; Pauleen & Yoong, 2001; Lilian, 2014; Lisak & Erez, 2015).

Sakar and Sahay (2003) states that collaboration of virtual teams do not occur merely after the electronic connectivity and enabling technologies are made to be in place. Authors state that a lot of systematic effort is required for a team to develop from the initiation to collaboration stage aligning communicative actions, team structural characteristics and interaction modalities.

Language could be the prime aspect of cross-cultural communication (Tenzer et al. 2014). When communicating and interacting in a cross-cultural team, the team members need to be conscious of cultural differences of communication styles among the team such as the level of formality considered as suitable, who should play the moderator role, who should initiate questions and conclude a topic, how much of debate and disagreements deemed appropriate (Gudykunst et al. 1996; Pauleen & Yoong, 2001). Moreover, when English is frequently used as the default communication language in cross-cultural environments it could possibly create difficulties within teams (Pincas, 2001; Staples & Zhao, 2006). Therefore team members should be informed of the possible communication constraints if English is not the mother tongue of some of the group members. Also as a ground rule use of slang or culturally specific expressions should be avoided (Cagiltay et al., 2015, p.10). Based on this, following proposition is developed:

Proposition 2: Systematic management of team communication helps reducing challenges in cross-cultural teams

2.4.3 Understanding and addressing the motivational factors

According to Geister et al. (2006), “Valence, instrumentality, self-efficacy and trust (system/person)” are the four major elements of motivation when it comes to virtual team performance. A transparent goal setting process and a clear definition of team objectives are essential to clarify the valence/value aspect (Muethel & Hoegl 2010). Having a clear and transparent task assignment mechanism, clarifying the relationship between tasks and individual contributions and providing feedback once the goals are achieved will support to fulfil the instrumentality factor (Muethel & Hoegl 2010, p. 461). Team members from individualistic cultures tend to have more self-efficacy compared to the individuals from collectivist cultures (Cagiltay et al., 2015, p. 9). However through a feedback and a training mechanism self-efficacy can be developed Geister et al. (2006). Virtual communication might impact reduction of trust and Team Corporation and facilitating face to face meetings and encouraging informal communication among the team members will help to uplift the trust (Geister et al., 2006). Based on this, following proposition is developed:

Proposition 3: Addressing elements of motivation (Valence, instrumentality, self-efficacy and trust) reduces challenges in cross cultural virtual teams.

2.4.4 Training the facilitators

Williams, et al. (2001) state that facilitation in virtual cross-cultural settings is a very difficult undertaking. Questioning, encouraging involvement, attending interpersonal and group dynamics, understanding expectations from the facilitator and revealing fears are some of the primary challenges the authors have identified.

The team leaders of virtual teams need to develop special skills through suitable trainings to facilitate such teams (Rosen et al., 2006). Also virtual team leaders requires to

provide constructive feedback to the teams and follow their progress closely (Sivunen, 2006). Based on this, following proposition is developed:

Proposition 4: Training of CCVT facilitators reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

2.4.5 Having conflict resolution strategies in place

The virtual communication differs from face-to-face communication as it lacks emotions, body language and facial expressions (Cagiltay et al., 2015, p. 2). As social “norms and standards” might not prevail in virtual environments, such settings could generate unintentional conflicts among team members (Vignovic & Thompson, 2010). If a dispute situation arise in a CCVT, the team lead/facilitator should have the expertise on how to use conflict resolution techniques effectively. The facilitator should be able to address issues and ambiguities, avoid taking sides, provide clear guidelines and direct the team towards a resolution (Cagiltay et al., 2015, p. 11). Based on this, following proposition is developed:

Proposition 5: Using collaborative conflict resolution strategy reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

2.5 Model of the study

Following conceptual model of the study is developed based on the literature review and the key findings of it. The four key challenges identified in managing cross-cultural virtual teams are depicted in the right side. The solutions or mechanisms identified to address the challenges are depicted in the left side. The study will explore and validate how the proposed solutions/mechanisms could be utilized in reducing the listed challenges and managing the CCVTs.

Solutions/mechanisms

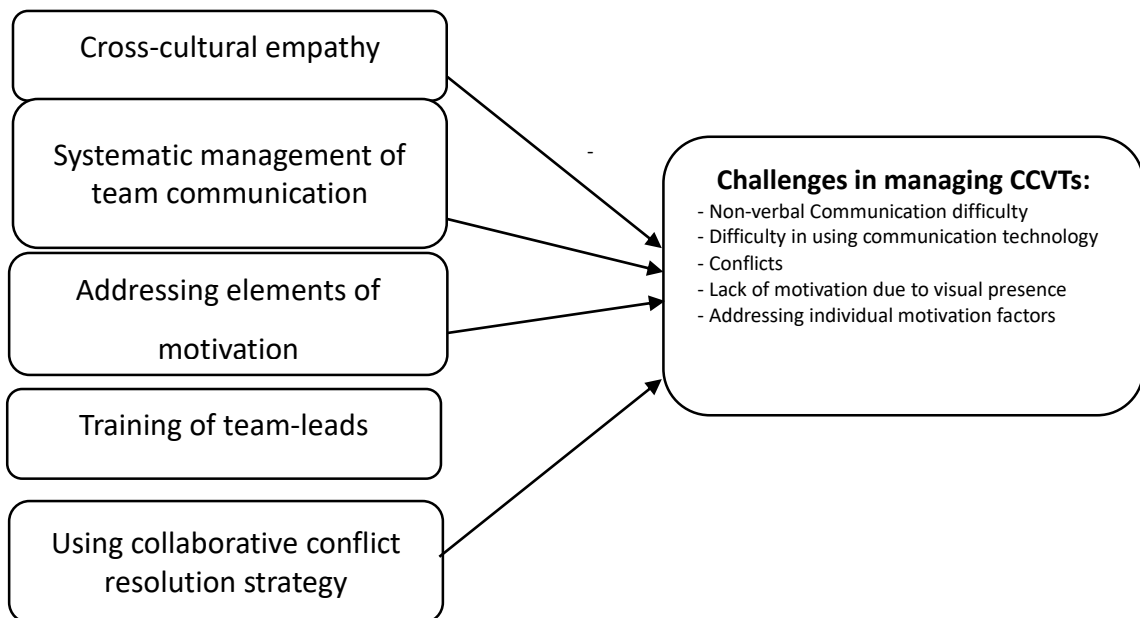


Figure 1. Conceptual model of mechanisms for reducing (i.e. managing) challenges in cross-cultural virtual teams.

3 Research Methodology

3.1 Research approach

Inductive approach and deductive approach are two different approaches to be considered when designing a research (Saunders et al., 2007, pg. 119). Deductive approach which originates from natural sciences enables a cause-effect link between variables without understanding how humans interpreted their social world and this is a criticism social science researchers have towards deduction approach (Saunders et al., 2007, pg. 119).

An inductive method to research focuses especially on the environment in which the events are occurred and studying a small sample is much appropriate with this method (Saunders et al., 2007, pg. 119). If a researcher is particularly interested in understanding “why something is happening instead of being able to describe what’s happening” it would be suitable to undertake the inductive approach than the deductive approach (Saunders et al., 2007, pg. 119).

In this research the author aimed to understand the challenges project leaders face while managing CCVTs and explore the optimal solutions/practices for managing these challenges in the context of IPOs. In order to do this author did a literature review of previous studies and developed a model which describes the key challenges and the potential solutions. Subsequently, the research model is validated based on the data collected. Therefore this research is conducted using the deductive method.

3.2 Research method

The research literature classifies research into three categories namely exploratory, descriptive and explanatory according to the purpose of a research (Saunders et al., 2007, pg. 131). According to Robson (2002, pg. 59) exploratory study is a valuable way to find out ‘what is happening; to seek new insights; to ask questions and to assess phenomena

in a new light'. Exploratory study is especially suitable if a researcher wishes to clear out the understanding about a problem, when you are not sure of the exact nature of the problem (Saunders et al., 2007, pg. 134).

An exploratory study can be conducted in three key ways namely, searching the literature, interviewing subject matter experts and interviewing focus groups (Saunders et al., 2007, pg. 134). Exploratory studies are adaptable to change and a researcher conducting an exploratory study should be willing to change the direction of the study if new data or new insights appear while conducting the study (Saunders et al., 2007, pg. 134).

The author conducted this research as an exploratory study. One key focus of the exploratory study was to clarify the research problem and deepen the understanding of it. Also the author intended to seek new insights in to the problem and the potential solutions.

It achieved by interviewing the experts of this topic who have real world experience and knowhow on the subject. Such experts who are working in the CCVT environments are able to provide their insights regarding the real world challenges and potential solutions. Also interviewing multiple such experts helped to look into the research problem in a wider perspective and gain knowledge on the current practises in place.

3.3 Research design strategy

Research design is the general approach in how the author will proceed in answering the research questions (Saunders et al., 2007, pg. 131). It will contain research objectives which derive from research questions, the sources the researcher intends to collect the data from, the constraints identified and ethical concerns (Saunders et al., 2007, pg. 131).

The research strategy showcase how a researcher intends to answer the research questions and implement the research methodology (*Understanding Different Research Perspectives*, 2015). Case study, qualitative interviews, quantitative surveys and action oriented research are some main research strategies a researcher could choose (*Under-*

standing Different Research Perspectives, 2015). In this research the author to uses qualitative interviews strategy. Conducting qualitative interviews with CCVT managers help gaining insights into the challenges their respective CCVTs are facing and the strategies being used to overcome the challenges. These would be primary data representing real world CCVT work.

3.4 Data collection and analysis techniques and procedures

3.4.1 Data Collection

The author carried out the data collection through semi structured interviews. When selecting interviewees a set of criteria set to select the most suitable people who could provide insights in to the topic in study. Following are the criteria set for potential candidates to be qualified as interviewees.

- i. The candidate should be leading a project team as a project manager, project leader or a team lead
- ii. The team managed by the candidate should consist of team members from more than two home countries making the team multi-cultural
- iii. The team members should be located in two countries or more
- iv. The team should use tools such as Zoom or Microsoft teams to connect

Further, the convenient sampling technique is used in selecting the interviewees. The interviewees are mainly reached via professional networks of the author and the research supervisor.

3.4.2 Semi-structured interview structure and operationalization

A researcher intendeds to cover a list of themes and questions during a semi-structured interview and those could be altered based on the organizational setting (Saunders et al., 2007, pg. 312). Furthermore in such interviews it's possible to change the order of the questions and ask additional questions for further explorations of the research question and objectives.

The researcher intends to develop a list of themes and questions to be asked in every interview as this would help to compare and contrast the data gathered. Further information and insights are recorded with additional questions or based on the way the conversation is developed. The questions are developed further to the review of prior literature. Studies of Oertig & Buergi (2006), Cagiltay et al. (2015) and Baptista (2022) are key prior literature papers selected and reviewed in developing the interview questions.

3.4.3 Recording data

The interviews are conducted via virtual means using voice and video recording tool Microsoft teams. These tool provides the facility to record the interview. Prior to recording the interview consent for recording is requested from the interviewees. Also interviewees are informed in advance that their privacy will be ensured and no personal data will be published without their consent. Also throughout the discussion they can refrain answering questions if they come to a point of sharing sensitive or confidential information.

If any interview takes place in a physical setting, interview recording is done via mobile voice recorder after obtaining permission to do so. After completion of this research these recordings will not be retained and will be deleted safely.

3.4.4 Role of the researcher

The researcher has developed the research modal and the research questions are designed based on that. Criterion set to identify the potential candidates for interviews. The interviewees are mainly found from the researcher's personal network. Also potential candidates are contacted based on recommendations from the research supervisor.

Interview themes and questions are designed as explained in the section 3.5.2. The interviews are conducted by the researcher in a semi structured manner. Questions are

asked covering the themes planned and as open ended questions allowing the interviewees to share their experience and ideas. Further questions are asked based on how the conversation is developed.

The researcher recorded the data of the interviews as explained in the 3.5.3 section and are used for the empirical data analysis. Finally the conclusions and recommendations are drawn by the researcher based on the results of the analysis.

3.4.5 Data analysis

According to Saunders et al. (2007, pg. 472) quantitative data are based on meanings obtained from numbers while qualitative data qualitative data are based on meanings conveyed through words. As this study will collect responses expressed in words during semi structured interviews, the data gathered would be of qualitative type. Furthermore the qualitative data would be non-standardised and it would require to be classified into categories and analysed through content analysis (Saunders et al., 2007, p. 472).

3.5 Validity and Reliability

According to Leung (2015), validity pertains to the appropriateness of the tools utilized and data gathered during the research endeavor. The current study enhances its validity by taking several measures. The interview questions were developed by reviewing the prior literature. Further, the thesis supervisor also reviewed and refined it to ensure its relevance to the objectives and ability to get valid responses from the interviewees. The choice of respondents also increased the validity of the study. A set of criteria defined to identify the qualifying interviewees. The study selected those respondents who were involved in the management of cross-cultural virtual teams in the context of IPs using the set criteria.

Reliability, on the other hand, focuses on the consistency of the process and results (Leung, 2015). To enhance reliability, researcher took following measures. Firstly, same

questionnaire was used to collect data from all respondents in order to have coherence in data collection strategy, and to compare the results from different cases. This assured the reliability of the findings. Secondly, researcher guaranteed case data security and anonymity of the interviewees and their case companies. This not only motivated them to freely give their views on the management of cross-cultural virtual teams, but also minimized the social desirability bias and enhanced the trustworthiness of qualitative data (Leung, 2015).

4 Empirical Findings

4.1 Interviewees' background

Table 2 shows the background of the eight respondents. These respondents were working in five different companies and were responsible for managing the cross-cultural virtual teams in the context of IPs. Their experience of managing cross-cultural virtual teams ranged from two to twenty-seven years.

Table 2. Background of the interviewees

Case	Interviewee	Job Title	Number of years in current job/role	Number of years with current company	Experience in managing CCVTs (years)	Number of CCVTs managed so far
A	Interviewee 1– Company 1	Scrum Master	2	2	2	2
B	Interviewee 2- Company 2	Associate Project Manager	2	2	5	5
C	Interviewee 3 – Company 3	HR PMO Professional	1	18	17	20 (approx.)
D	Interviewee 4 – Company 4	Business Development Manager	10	27	10	Many
E	Interviewee 5 – Company 3	Manager solution support and management	2 months	10	8	5
F	Interviewee 6 – Company 4	Global solution owner	1	16	18	Many
G	Interviewee 7 – Company 5	Head of Nordic Payments Execution Leadership	7	8	22	30 (approx.)
H	Interviewee 8 – Company 3	People Transformation Manager	4	24	18	30 (approx.)

4.2 Company backgrounds

Table 3 shows the background of case companies. Case companies are operating in different industries, and their size varies from 5,225 to 107, 900 employees according to year 2023 data. Their annual turnover of 2023 varies from 6.02 billion to 29.4 billion euros.

Table 3. Background of the case companies

Company Name	Primary Industry	Number of Employees (end of 2023)	Annual turnover in 2023
Company 1	Energy Production	5,225	€6.71 billion
Company 2	Industrial automation and electrical appliances	107, 900	€29.4 billion
Company 3	Telecommunications and networking technology	86,000	€22.3 billion
Company 4	Energy and marine technology	16,500	€6.02 billion
Company 5	Financial services	29,153	€11.7 billion

4.3 Characteristics, challenges and optimal solutions for managing CCVTs in investigated cases

4.3.1 Case A

Characteristics

Characterises of the CCVT in case A are summarized in below table 4. CCVT comprised of 14 members located within 5 different countries, and having 9 different nationalities. Further, Microsoft teams and Slack are used as communication tools to coordinate and management of the team.

Table 4. Characteristics of Case A

Company	Company 1
IP	Web solutions development for electricity customers. The solutions are developed to cater Nordic markets with the ability to be scaled up or down for different markets.
Team size of the CCVT	14
Geographical distribution of the team	Across 5 countries – Sweden, Finland, Norway, Ukraine, Poland
Number of nationalities	9 - Swedish, Norwegian, Greek, Finnish, Vietnamese, Polish, Sri Lankan, Ukrainian, Iranian
Team formation time	June 2023

Team continuation	Till end of 2025
Communication tools	Microsoft Teams, Slack
Communication frequency	Daily team meetings, 2 to 3 times a day with individual members

Challenges

Communication

Nordic team members tend to be a bit more Indirect and would stay away from conflict as much as possible as it is uncomfortable for them. Also they wouldn't know how to handle such situations or give feedback to each other. This is one major issue the team is facing.

Another challenge is that some team members can be too loud and while some others could be too silent. Loud voices, get to be more highlighted during virtual meetings or they get to speak more. This could be a personal or a cultural aspect.

Conflicts

Frequency of the conflicts totally depends on the phase of the project. It tends to increase during go live periods due to overall high stress level. Other times it would be random. Conflicts could happen due to cultural differences or due to personality differences.

Motivation/Energy

"In general, people don't like to be in meetings that much, and it can be very exhausting, especially for software developers. They would like to spend their time working on the code rather than being in meetings" (interviewee 1). However overall the interviewee 1 is quite happy with the engagement level in the meetings and how the team contribute to the meetings.

Other challenges

Lack of space to sit together and work is a challenge for the software development team as the team is spread across the countries. Due to this the team may take extra time for

some tasks. Therefore, this can be explained as an interaction challenge. Below table summarizes the challenges faced during the management of CCVT in case A.

Table 5. Faced challenges in Case A

Challenges	Case A
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 6 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in case A. The examples of used mechanisms quoted during the interview are also mentioned in below table 6.

Table 6. Used mechanisms to solve challenges in the CCVT – Case A

Mechanism/Strategy	Rating	Comments (Interviewee 1)
Using Empathy	High	Yes. <i>“Whenever I feel someone is not doing fine or if there is an issue, I do quickly notice. I do have one to one meetings with the team members quite often and address such issues. And always I try to create the bridge between people to talk to each other and bring them together to address certain things. So. Help each other”.</i>
Using Effective Communication	High	<i>“Definitely yes”.</i>
Getting Trained to manage CCVTs	No	No special training has received to manage cross-cultural teams. For Virtual team management training received. <u>Special skills a CCVT manager would need to build:</u> Empathy, Listening, time management, understanding of psychology, technical competency to use the tools
Training team members to work in CCVTs	No	No training received. On the job learning
Motivating team members for active participation in meetings and being responsible	Yes	<ul style="list-style-type: none"> <i>“Checking how much they are present and how they are feeling and what kind of contribution they will be doing to this meeting. If they have specific topics to address. We would give them a heads up to be engaged”.</i>

		<ul style="list-style-type: none"> • <i>“One on one meetings with team members also have been quite helpful to give feedback or receive feedback about the meetings and how we should effectively do certain meetings”.</i> • <i>“When people need to be responsible, adding action points and following up on those things”.</i> • <i>“In retrospective meetings we agree on certain ways of working/processes. Then we will definitely add action points and add people as responsible to take care of these things”.</i>
Resolving conflicts between team members	Yes	<p>Would look at the nature of the conflict and how it can be resolved, mostly collaborative or accommodative approaches are used.</p> <p><i>“If it does not need my involvement and the team can resolve it I would allow that”.</i></p>
Other strategies		<ul style="list-style-type: none"> • Doing team meet ups (physical) 4 times a year (two planning sessions, two meet up sessions). This helps to sit in one space and get to know each other. • Giving space for the team to be self-organized and giving them many platforms to collaborate. The self-organized team is quite good at resolving their own challenges and asking for help if required. • Agreeing on certain principles to follow as a team for areas such as product/process quality. This helps to make the team accountable as a whole. • Giving informal feedback to one another is encouraged. Focus is on giving constructive feedback for individual growth and be open to receive feedback.

4.3.2 Case B

Characteristics

Characterises of the CCVT in case B are summarized in below table 7. The CCVT comprised of 8 members located within 5 different countries, and having 4 different nationalities. Further, Microsoft Teams is used as the key communication tool to coordinate and manage the team.

Table 7. Characteristics of Case B

Company	Company 2
IP	A service based team (namely agile office) acting as agile consultants to the internal organization and responsible of an agile transformation of 130 internal teams which consist of 1000 people. The agile office works on continuous improvement of this transformation.
Team size of the CCVT	8
Geographical distribution of the team	Across 5 countries – Finland, Germany, Italy, Switzerland, China
Number of nationalities	4 - Italian, Indian, German, Chinese
Team formation time	June 2023
Team continuation	Up to 3 years
Communication tools	Microsoft teams
Communication frequency	One daily team meeting, other meetings 2 to 3 times a day

Challenges

Communication

Challenges persists in communication because every culture has a different way of understanding things and portraying things. There are challenges in understanding Finnish members, as they are not very straightforward. Comparatively the Germans team member tend to be quite straightforward, so it is much easier to understand what exactly is required. Italian team members have a different way of working. The Chinese team member has a totally different time zone and different way of working. Due to these differences many challenges persisted in the beginning as the team was trying to understand each other.

The team is a global team where English is the main language. However for all the team members it is the second language not the native language.

With regards to the quality of communication, certain team members are bit hesitant to give feedback and you may need to scratch a lot to get some feedback. For communication it is very important to give feedback and receive feedback as well. This challenge could have been less if the team is co-located. “These challenges arise because you are

located in different places and you're coming from very different backgrounds, you know, cultural backgrounds. As the team members have got used to each other now, the team is getting used to giving a lot of feedback” (interviewee 2).

Conflicts

The team does not have a lot of conflicts as some of the team members have worked together before the team was formed. Having the trust factor is important and we have a good level of trust within. The conflicts occurred was not due to the cultural differences but due to the virtual nature of the team.

Motivation/Energy

“Motivation and nature of each and every individual is quite different. Two quarters ago, we passed the value of motivation where the motivation dropped entirely. And then we had couple of co-locations. We were together for a couple of weeks and then the motivation went high. In, in my case, I think it's very difficult to contain the motivation when you have entirety of meetings with your entire team, so it's very difficult to keep them motivated. If we were co-located, I think overall the motivation would have been much better. Because it's very difficult to express all your views through videos. When you're in a virtual meeting, it's very difficult to do that” (interviewee 2).

Also motivation could do down during the stressful periods of work.

Table 8. Faced challenges in Case B

Challenges	Case B
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 9 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in case B. The examples of used mechanisms quoted during the interview are also mentioned in below table 9.

Table 9. Used mechanisms to solve challenges in the CCVT – Case B

Mechanism/Strategy	Rating	Comments (Interviewee 2)
Using Empathy	High	
Using Effective Communication	Medium	There is room for improvement
Getting Trained to manage CCVTs	No	<ul style="list-style-type: none"> Have not received any training on this part. The nature of the teams overall in company are cross country and they are virtual teams. It's good to have trainings if possible. Trainings could give a foundation. However it will be built on actual work in CCVTs and experience. <u>Special skills a CCVT manager would need to build:</u> being open minded because cultural aspects play quite an important role.
Training team members to work in CCVTs	No	The team has not received special training to work in CCVTs. However when building the team, prior experience in working in cross-cultural teams was a main area which was looked at.
Motivating team members for active participation in meetings and being responsible	Yes	<ul style="list-style-type: none"> Motivating team members during the meetings is challenging as there is a lot of agenda to pick up. Many one to one meetings are being held with the team members to understand what factors would motivate the individual (intrinsic or extrinsic). Playing accordingly after understanding specific needs. Fostering openness within the team
Resolving conflicts between team members	Yes	<ul style="list-style-type: none"> In most of the cases collaborative strategy is used. Sometimes forcing when some aspects are top down in nature and decisions needs to be made. <i>“We try to understand where people fall in these brackets and what their core competencies are. When they're having a conflict, how things will work out? Accordingly we have worked on certain aspects”.</i>
Other strategies		<ul style="list-style-type: none"> When building the team extensive amount of time was spent co-located also in understanding the personalities.

		<ul style="list-style-type: none"> • Every quarter one or two weeks of co-location happens for the team in different locations during which the team members as well as the stakeholders are met. • The team had been knowing each other for a long time therefore there is a huge personal touch and friendliness. This helps to get rid of many challenges and reducing conflicts.
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4.3.3 Case C

Characteristics

Characterises of the CCVT in case C are summarized in below table 10. The CCVT comprised of 50 members located within 11+ countries, and having 11+ nationalities. Further, Microsoft Teams is used as the key communication tool to coordinate and manage the team.

Table 10. Characteristics of Case C

Company	Company 3
IPO	An HRIT transformation for the HR organization of the company. This is an internal program which would replace a series of legacy systems with a new HCM system. The system to be used by all the employees of the company.
Team size of the CCVT	50 (the core team dealt with by the interviewee)
Geographical distribution of the team	11+ countries - Europe (Finland, France, Germany, Hungary, Portugal, Belgium, Greece, Spain), India, US, China
Number of nationalities	11+ nationalities - German, Finnish, French, Portuguese, US, Indian, Chinese, Hungarian, Latvian, Greek, Belgian
Team formation time	2021
Team continuation	Till end of 2025
Communication tools	Microsoft Teams
Communication frequency	2 Weekly team meetings, daily meetings for various topics with different sub groups

Challenges

Communication

Do not see real challenges differences due to cultural backgrounds since everyone is very much used to it. However virtually brings delay in responses. You are unable to quickly speak to another person similar to someone who is sitting next to you. Chat and email applications are main forms of getting in touch. If there is no response you need to keep reminding. Sometimes you may not get answers or answers could come very late.

“In my role as I have to be in touch with many people it could become really difficult” (interviewee 3). While some team members could respond very quickly some may not. Therefore challenge is you need to learn about the individuals and the best way of getting in touch with them.

Also the team is very global and scattered across multiple zones. That would also challenging when it comes to connecting with each other.

Conflicts

Conflicts are very rare. Conflicts could happen due to people having differences in opinion on various topics in discussion rather than due to different cultural backgrounds or virtual setting. Some cultures may discuss more politely than the others and this could be a personal characteristic as well.

Motivation/Energy

Sitting in-front of a PC throughout all the meetings could give a lot of opportunities for an individual to be easily distracted through emails and chat messages. If you not the one who is speaking in the meeting or if you are not spoken directly you would be in the listening mode and prone to be distracted. Also energy of the team could drop and there could not be responses when questions are asked. Motivation comes from focus and relevance.

Addressing demotivation

Several steps are taken to address to lift the motivation and engagement. Those who are relevant for the meeting are invited instead of the larger group. Program scrum meetings with smaller groups are started replacing large weekly status review meeting. Discussion is focused on most important things and it also makes the meeting more productive.

Table 11. Faced challenges in Case C

Challenges	Case C
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 12 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in case C. The examples of used mechanisms quoted during the interview are also mentioned in below table 12.

Table 12. Used mechanisms to solve challenges in the CCVT – Case C

Mechanism/Strategy	Rating	Comments (Interviewee 3)
Using Empathy	Medium	<i>"I would be understanding, being open for discussion and approachable. However in getting things done there is limit for understanding all the good excuses".</i>
Using Effective Communication	High	<i>"It is the key point of my job. You need to communicate effectively".</i>
Getting Trained to manage CCVTs	No	It is mainly on the job training <u>Special skills a CCVT manager would need to build:</u> <ul style="list-style-type: none"> • Listening • "Being present and visible so that the team knows you are there; If you are not visible you aren't managing", • Being approachable • Ability to hold the things together so that you know the overall status of the program • Letting go of some of the things since you cannot see everybody

		<ul style="list-style-type: none"> Trusting people to do their job and knowing the crucial gist of everything
Training team members to work in CCVTs	No	No formal trainings received. It's on the job training. Some basic formal training will be favorable. However the actual learning will happen on the job as it mainly depends on the people you are working with.
Motivating team members for active participation in meetings and being responsible	Yes	<ul style="list-style-type: none"> Having an agenda and making it clear to everybody. Communicating the elements of agenda to respective individuals <i>"I would be more focused on their motivation in the background to do the job to achieve the common goal over the motivation in the meetings"</i>
Resolving conflicts between team members	Yes	Conflicts are of low occurrence. It's a mixture of collaborative and compromising strategies and a sense of understanding where people are coming from and then trying to find a solution.
Other strategies		<ul style="list-style-type: none"> Using one-on-one communication whenever it makes sense. This would help in building relationships and getting to know people better. <i>"You need to be able to assess people's opinions and people's viewpoints and people's personalities and characters"</i>.

4.3.4 Case D

Characteristics

Characterises of the CCVT in case D are summarized in below table 13. CCVT comprised of 20 members located within 6 different countries, and having 7 different nationalities. Further, Microsoft Teams is used as the key communication tool to coordinate and manage the team.

Table 13. Characteristics of Case D

Company	Company 4
IPO	Energy equipment sales to Northeast Asian and Southeast Asia
Team size of the CCVT	20

Geographical distribution of the team	6 countries - Finland, China, Japan, Korea, Indonesia, Taiwan
Number of nationalities	7 – Indian, Chinese, Finnish, Japanese, Korean, Indonesian, Taiwanese
Team formation time	10 years ago
Team continuation	Continuous. No end date
Communication tools	Microsoft Teams
Communication frequency	Once in two days on average

Challenges

Communication

There could be challenges due to different levels of understandings. Sometimes you may need to be firm and stand on your position in negotiations.

Also you need to understand the respective cultures. As an example Japanese people would expect you to be polite and explain things in detail.

Time zone differences are a challenge to manage. Between Finland and respective East Asian countries there is a 5+ hour time gap.

Communication was more challenging in the beginning and has improved over the years.

Conflicts

Conflicts could occur at the negotiations on pricings, margins and certain approvals. You may have to be stubborn at certain points and different cultures would receive it differently.

Motivation/Energy

Meetings are often held for technical or commercial clarifications. Overall motivation of the team is clear and high as the team is motivated to meet the set targets.

Table 14. Faced challenges in Case D

Challenges	Case D
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 15 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in case D. The examples of used mechanisms quoted during the interview are also mentioned in below table 15.

Table 15. Used mechanisms to solve challenges in the CCVT – Case D

Mechanism/Strategy	Rating	Comments (Interviewee 4)
Using Empathy	Medium	You may understand the view point of the other but sometimes you may not be able to approve or accommodate the requests sometimes.
Using Effective Communication	High	This is very important and a must have
Getting Trained to manage CCVTs	No	No special trainings. Learnings are through personal experience and relationship building. <u>Special skills a CCVT manager would need to build:</u> <ul style="list-style-type: none"> • Being open for discussions • Listening • Communication • Respecting other's views
Training team members to work in CCVTs	No	No special trainings. There are sales meetings and seminars to meet the team members and this helps in getting to know each other and building up relationships. Once the relationships are built the team acts more aligned.
Motivating team members for active participation in meetings and being responsible	Yes	Having the common goals to achieve as a team. First team would be motivated to achieve the goals. Once the goals are achieved motivation would go further up
Resolving conflicts between team members	Yes	Collaborative or compromise strategy is used. Forcing definitely not used.
Other strategies		<ul style="list-style-type: none"> • Developing trust is essential • Building good personal relationships within the team

4.3.5 Case E

Characteristics

Characterises of the CCVT in case E are summarized in below table 16. The CCVT comprised of 12 members located within 5 different countries, and having 6 different nationalities. Further, Microsoft Teams is used as the key communication tools to coordinate and manage the team.

Table 16.Characteristics of Case E

Company	Company 3
IPO	An HRIT transformation for the HR organization of the company. Configuration of the core HR system and some other legacy HR systems. Also providing specific configurations for business groups.
Team size of the CCVT	12
Geographical distribution of the team	5 countries - China, India, Finland, Hungary, Portugal.
Number of nationalities	6 – Chinese, Indian, Finnish, German, Hungarian, Portuguese
Team formation time	September 2023
Team continuation	August 2025
Communication tools	Microsoft Teams
Communication frequency	Daily, regular check point meetings, by weekly team meetings, monthly one-on-one meetings,

Challenges

Communication

Not everyone is comfortable having the camera on during meetings. Therefore you cannot get the visual impression of how someone is feeling or responding. Understanding each other's differences and meanings behind some gestures is important. Sometimes rephrasing some discussion points to may needed to ensure all have the same understanding. Directness in communication and giving feedback vary from culture to culture.

Conflicts

Conflicts are rarely observed or escalated to the CCVT manager.

Motivation/Energy

While some team members could be proactive others may not. This depends on the maturity level of the each individual as-well.

A range of motivation or energy levels are observed during the meetings also during the different phases of the project. Celebrating team achievements in a virtual setting is also challenging.

Table 17. Faced challenges in Case E

Challenges	Case E
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 18 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in case E. The examples of used mechanisms quoted during the interview are also mentioned in below table 18.

Table 18. Used mechanisms to solve challenges in the CCVT – Case E

Mechanism/Strategy	Rating	Comments (Interviewee 5)
Using Empathy	Medium	
Using Effective Communication	High	This is essential. Team members are experts in their own. As a team we know more than as individuals.
Getting Trained to manage CCVTs	No	No special training received. Self-learning through work and reading. <u>Special skills a CCVT manager would need to build:</u> <ul style="list-style-type: none"> • Being aware of cultural differences and understanding that you cannot impose your style on others

Mechanism/Strategy	Rating	Comments (Interviewee 5)
		<ul style="list-style-type: none"> Being approachable making it easier for the team to open up to you Effective communication between you and the team members
Training team members to work in CCVTs	No	No formal trainings received. It's on the job training. There had been trainings to understand personality types but not on CCVTs
Motivating team members for active participation in meetings and being responsible	Yes	<ul style="list-style-type: none"> Would often open the meeting and let team members volunteer and speak. Sometimes address the individuals. However respect if someone does not want to speak up. There would be 5-10% who would be very active in speaking. Also there would be others who would not be comfortable in speaking in bigger groups. You may need to speak to them individually to know their views. Knowing everyone's view or giving the possibility for everyone to express themselves because each team member is important.
Resolving conflicts between team members	Yes	Collaborative or compromise strategy is used. Usually will work on finding a middle way with the team instead of imposing things.
Other strategies		<ul style="list-style-type: none"> Developing trust Getting to know each other in the team beyond work

4.3.6 Case F

Characterises of the CCVT in case F are summarized in below table 19. The CCVT comprised of 14 members located within 5 different countries, and having 9 different nationalities. Further, Microsoft Teams and Slack are used as communication tools to coordinate and manage the team.

Table 19. Characteristics of Case F

Company	Company 4
IPO	Strategy implementation. A service team for internal clients
Team size of the CCVT	40

Geographical distribution of the team	7 countries – Finland, India, Norway, Denmark, Germany, China, France
Number of nationalities	Around 12 nationalities
Team formation time	September 2023
Team continuation	Till late 2025
Communication tools	Microsoft Teams
Communication frequency	Daily multiple times

Challenges

Communication

Virtual team working only virtually is more challenging than cultural differences. There could be team members who are introvert and who are not comfortable in opening their camera and this could happen regardless of the culture.

Virtual world is different from physical allocation. *“The filters we use for virtual communication are different and more impactful than just the cultural differences. If I turn off my camera and if you're not able to understand from which region I am, you are not able to distinguish me through my accent. This brings additional complexity and difficulty in team management”* (interviewee 6).

As an example how do you decide a decision is made in CCVT? There could be different phases of apprehension that the decision is made which could vary across cultures. *“Since you live in Finland and you're working with people in Finland, you would understand, how this decision making is done and the behaviour. And then you work with people from a different parts of the world whom you don't meet physically. So an additional effort you need to do in the virtual environment is that you have to document the decision in such a way that it becomes culture free”* (interviewee 6).

Conflicts

Conflicts occurring are not due to the cultural differences of virtual nature, but mainly regarding the technicalities of the work. Team members may require more time and effort to start working together on a certain task.

Motivation/Energy

People would get excited with the work tasks they would have to do. Hence the task itself could motivate an individual. Demotivation could come when one cannot perform the task as expected.

When you are in a virtual meeting one could easily be distracted. The team has a good team culture and if an individual is doing multitasking he/she would be open about it. Therefore it may not appear to the others as the person is demotivated instead it will be known that the person is attending something urgent in parallel which he/she has to prioritise while contributing to the current meeting.

Table 20. Faced challenges in Case F

Challenges	Case F
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 21 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in Case F. The examples of used mechanisms quoted during the interview are also mentioned in below table 21.

Table 21. Used mechanisms to solve challenges in the CCVT – Case F

Mechanism/Strategy	Rating	Comments (Interviewee 6)
Using Empathy	High	This is very relevant. You have to be sensitive to the feelings of others. When you are collocated you have multiple ways of sensing others which are missing in virtual setting.

Using Effective Communication	High	This is very relevant.
Getting Trained to manage CCVTs	No	No special training received. Self-learning and on the job training
Training team members to work in CCVTs	No	No special training received. Once joined the company the onboarding packages covers some cross-cultural aspects (differences and values). Other than that no specific training aimed on CCVT work.
Motivating team members for active participation in meetings and being responsible	Yes	
Resolving conflicts between team members	Yes	Accommodative is used often connected with empathy. Collaborative strategy is also used.
Other strategies		<ul style="list-style-type: none"> Understanding what motivates a person with regards to career. As an example it is not as important to be high in hierarchy in Finland as it is important in China. Therefore it is important to know where a team member stand in his/her carrier with respective to the cultural background. Having face to face team meeting every 3rd/4th month

4.3.7 Case G

Characteristics

Characterises of the CCVT in case G are summarized in below table 22. CCVT comprised of 20 members located within 5 different countries, and having 15 different nationalities. Further, Microsoft Teams is used as the key communication tool to coordinate and manage the team.

Table 22. Characteristics of Case G

Company	Company 5
IPO	A team of internal project consultants leading the project executions
Team size of the CCVT	20
Geographical distribution of the team	5 countries - Finland, Norway, Sweden, Denmark, Poland, India
Number of nationalities	15 nationalities
Team formation time	5 years ago
Team continuation	To be continued. No end date

Communication tools	Microsoft Teams
Communication frequency	Daily meetings, Weekly team meetings

Challenges

Communication

“Understanding cultural differences are really critical (Interviewee 7)”. As an example if you work with Finnish team members you need to have patience and understanding to wait for the responses as Finnish people are comfortable with silences. Certain cultures may commit to unrealistic things and find it difficult to say no or complain. These differences need to be understood to connect with people from respective cultures.

When communicating virtually you may not see the gestures or reactions of the team members which is also challenging.

Conflicts

There could be individuals with stricter opinions and less flexible. In Nordics decisions are arrived through discussions and consciences. This could irritate people from some other cultures who expects faster decision making.

Motivation/Energy

Energy levels could vary during different meetings. There could be high and low energy levels across meetings. *“Some cultures are not that loud or they are not encouraged to be overly energetic. They would have more calm and subdued presence as it is how they are raised, while others are encouraged to share their opinions, challenge others and so on (Interviewee 7)”*.

Addressing demotivation

People would be more energised once they are praised and regarded as valuable employees. Understanding what motivates a person from a particular culture.

Table 23. Faced challenges in Case G

Challenges	Case G
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 24 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in Case G. The examples of used mechanisms quoted during the interviews are also mentioned in below table 24.

Table 24. Used mechanisms to solve challenges in the CCVT – Case G

Mechanism/Strategy	Rating	Comments (Interviewee 7)
Using Empathy	High	There could be people whom you can easily connect to. Also another whom you have challenges to connect with or understand. In a situation like that <i>“press the pose as long as needed to enable yourself to change from the emotions you may have initially had to something that you start seeing in a different way and start empathizing with people. That is absolutely critical and everything comes down to that”</i> .
Using Effective Communication	High	This is absolutely important. It is also important to hear others and give them chance to speak. When a manager is focused on tasks due to time pressure and criticality it's possible for team members to feel not heard/not listen to. Therefore it's important to acknowledge people and their opinions and deal with those in a proper way.
Getting Trained to manage CCVTs	No	Maybe some trainings in the past took place. However it's mainly obtained through work experience.
Training team members to work in CCVTs	No	No special trainings taken place. However it's very necessary to have the team members trained as-well
Motivating team members for active participation in meetings and being responsible		<ul style="list-style-type: none"> Encouraging team members to speak up. <i>“You lose the part of the team Brains if you don't succeed in animating them”</i>. There could be team members who are loud and taking time impacting others. It's important to deal with that and give everyone fair opportunities and encouragement.

Resolving conflicts between team members	Yes	<ul style="list-style-type: none"> • Strategy used will depend on the situation and what kind of a conflict is that. • Mainly collaborative approach is used. Forcing is not used. Avoiding could make the situation worse. • <i>“It is important to first understand individually, what people are experiencing and whether they are aware of the impact on others and also those who are on the receiving side how are experiencing it”.</i> • <i>“Facilitating some meetings together for this to be shared between them and try to connect them depending on what stage the conflict is in how far has gone. Assuming the intentions of people involved are the best”.</i>
Other strategies		<ul style="list-style-type: none"> • Developing trust • Developing a safe environment. It is important to consider what constitutes a safe environment for different cultures.

4.3.8 Case H

Characteristics

Characterises of the CCVT in case H are summarized in below table 25. The CCVT comprised of 10 members located within 3 different countries, and having 2 different nationalities. Further, Microsoft Teams is used as the key communication tool to coordinate and manage the team.

Table 25. Characteristics of Case H

Company	Company 3
IPO	An HRIT transformation for the HR organization of the company. Data migration from legacy system to the new system.
Team size of the CCVT	10
Geographical distribution of the team	3 countries – France, Belgium, India
Number of nationalities	2 – French, Indian
Team formation time	2022
Team continuation	July 2025
Communication tools	Microsoft Teams
Communication frequency	Daily

Challenges

Communication

Time zone differences are a major challenge and complicated to manage. Especially when the team is working with extended stakeholders, as there would be people in Europe, India and Americas.

Keeping people engaged is also a challenge due to distances.

Calls with no video on is also make it difficult to read the body language of the participants. Sometimes even if the points discussed are not clear some people might not raise it.

Cultural awareness between the team members are needed as some of the things could be interpreted differently between people from different cultures.

Conflicts

Occurrence of conflicts are of low frequency. During early stages/team formation period there were some conflicts which did not occur later on. There was an instance where a conflict occurred due to the tone of communication of one person. While nothing bad was mentioned as the message came strong it was perceived as offensive by the recipients and then it was escalated. Cultural differences was a main reason behind how it was perceived.

Motivation/Energy

When you recognize the people and the work they are doing you can observe the energy level is really increasing.

Motivation also depends a lot on how you are approaching the team. Energy can be low in the meetings as sometimes one person is speaking while others are listen and no one is answering. So you have to keep people engaged using different ways, sometimes directly naming and speaking to individuals. You may get more answers in one to one discussions over group meetings.

Addressing demotivation

Lack of recognition is demotivating. Even during tight schedules it is important to take time to recognise hard work and achievements. Once the hard work and achievements openly appreciated notifying management it could really boost team energy.

Table 26. Faced challenges in Case H

Challenges	Case H
Communication difficulty	✓
Conflicts	✓
Motivation/energy issue	✓

Optimal solutions

Table 27 summarises the used optimal solutions/mechanisms to solve challenges in the management of the CCVT in Case H. The examples of used mechanisms quoted during the interviews and also mentioned in below table 27.

Table 27. Used mechanisms to solve challenges in the CCVT – Case H

Mechanism/Strategy	Rating	Comments (Interviewee 8)
Using Empathy	High	It is important to put yourself on the position of the person and trying to understand the situation.
Using Effective Communication	High	This is very important. You may have to repeat or rephrase until it is assured that the message is passed across accurately. You can take notes and share the screen while taking those to ensure what's recorded is visible to others. This could also help.
Getting Trained to manage CCVTs	No	No special training received. It is from the personal learnings out of curiosity and interest on other cultures. <u>Special skills a CCVT manager would need to build:</u> <ul style="list-style-type: none"> • Being empathetic • Being interested in learning about other cultures. Moment you are interested, you will be open to learning and connecting with people across cultures • Ability to keep the people engaged. • Being approachable. Therefore people do not have fear to contact you.

Training team members to work in CCVTs	No	No special training received. On the job learning
Motivating team members for active participation in meetings and being responsible	Yes	<ul style="list-style-type: none"> • Keeping them informed upfront about the topic in discussion so people could be prepared • Keep the team engaged during the discussion. Maybe requesting inputs from individuals by calling their names.
Resolving conflicts between team members	Yes	Collaborative approach is used mainly. Forcing is not used. Once you force you won't get the buy in of the person. Person may do it due to authority. But if the person is not with you it could play against later on.
Other strategies		<ul style="list-style-type: none"> • Developing trust • Having some virtual calls trying to build a relationship with team members. To be interested in what a person does next to work. This is not to be curious about private life but to find some elements to connect with the person. • Building a safe environment within the team

4.4 Cross-case analysis

4.4.1 Challenges in managing CCVTs in IPOs

Below table 28 summarizes the key challenges faced by the eight CCVTs studied. All the eight CCVTs face communication difficulties, conflicts and challenges in upholding motivation and energy. The CCVTs face these challenges at varying levels. However all have reported to face these challenges at different phases of their projects or during day to day work.

Table 28. Summary of the challenges faced by the CCVTs

Key challenges	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H
Communication difficulty	✓	✓	✓	✓	✓	✓	✓	✓
Conflicts	✓	✓	✓	✓	✓	✓	✓	✓
Motivation/energy issue	✓	✓	✓	✓	✓	✓	✓	✓

In the following section the key challenges identified based on the responses given by the eight interviewees are listed in detail.

1. Challenges persists in communication because every culture has a different way of understanding things and portraying things. Cultural awareness between the team members are needed as some of the things could be interpreted differently between people from different cultures.
2. There are challenges in understanding Finnish and Nordic members, as they are not very straightforward. Comparatively people from some cultures (E.g. German, French, Belgian) tend to be quite straightforward, so it's much easier to understand what exactly is required
3. Some team members being too loud and while some others could be too silent during meetings. Loud voices, get to be more highlighted during virtual meetings or they get to speak more. This could be a personal or a cultural aspect.
4. Team members being hesitant to give feedback due to cultural or personal nature is a challenge. For communication it is very important to give feedback and receive feedback as well. Nordic team members are noticed as less communicative when it comes to giving feedback.
5. There could be different phases of apprehension that a decision is made, which could vary across cultures. Therefore in virtual environment as an extra step you may need to document the decisions in such a way that it becomes culture free.
6. Conflicts could happen due to cultural differences or due to personality differences. Frequency of the conflicts could depend on the phase of the project. It tends to increase during critical project periods due to overall high stress level.

7. English is the main language for all the international teams studied. However for many team members in respective teams it is the second language not the native language.
8. When team is very global and scattered across multiple zones it would be a major challenge when it comes to having meetings and connecting with each other as there could be less number of overlapping hours in a day between the team members.
9. Lack of opportunity to sit together and work is a challenge for teams as the virtual teams are spread across the countries. Due to this teams may take extra time for some tasks. This can be explained as an interaction challenge.
10. Virtually brings delay in responses. You are unable to quickly speak to another person similar to someone who is sitting next to you. Apart from calls, chat and email applications are main forms of getting in touch. If there is no response you may need to keep reminding. Sometimes you may not get answers or answers could come very late.
11. Not everyone is comfortable having the camera on during meetings. Therefore you cannot get the visual impression of how someone is feeling or responding. Understanding each other's differences and meanings behind some gestures is important. Sometimes rephrasing some discussion points to may needed to ensure all have the same understanding.
12. Due to virtual nature of the work teams could have meetings at higher frequency, even daily or several times a day. This could be very exhausting and impact the energy levels of team members.
13. Sitting in-front of a PC throughout all the meetings could give a lot of opportunities for an individual to be easily distracted through emails and chat messages. If you not

the one who is speaking in the meeting or if you are not spoken directly you would be in the listening mode and prone to be distracted.

14. Celebrating team achievements in a virtual setting is challenging compared to co-location.

4.4.2 Optimal solutions for managing challenges in IPOs

Table 28 summarizes the used mechanisms in managing key challenges in CCVTs. It can observe that empathy and effective communication are highly used strategies for managing CCVTs. Also all CCVT managers use mechanisms to motivate team members for active participation in meetings and to be responsible. Furthermore all CCVT managers use collaborative conflict resolution strategy in resolving conflicts. The CCVT managers have not received special training for managing the CCVTs and CCVT team members have not received focused training on working in CCVTs. For both parties it is on the job training.

The 8 CCVTs reports mainly low otherwise medium difficulty in communication. Similar results are reported for level of conflicts. Motivation and energy issues are reported mainly at medium level for 6 CCVTs and low for 2 CCVTs. The applied mechanism to address challenges have resulted these ratings.

Therefore it can deduce that empathy, effective communication, addressing elements of motivation and collaborative conflict resolution strategies help reducing overall challenges of communication, frequency of conflicts, and motivation issues in CCVTs.

Table 29. Summary of optimal solutions/mechanisms in all cases

Mechanisms	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H
Using Empathy	High	High	Medium	Medium	Medium	High	High	High

Using Effective Communication	High	Me- dium	High	High	High	High	High	High
Getting Trained to manage CCVTs	No	No	No	No	No	No	No	No
Training team members to work in CCVTs	No	No	No	No	No	No	No	No
Motivating team members for active participation in meetings and being responsible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Resolving conflicts between team members	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Challenges								
Communication difficulty	Low	Me- dium	Me- dium	Low	Low	Low	Low	Low
Frequency of Conflicts	Me- dium	Low	Low	Low	Low	Low	Low	Low
Motivation/energy issue	Low	Me- dium	Me- dium	Low	Me- dium	Me- dium	Me- dium	Me- dium

Empathy

Out of the eight interviewees five has rated strategy of empathy being used highly and three has rated it as being used at medium level.

- Being empathetic would help to quickly notice if there are any issues faced by the team members. And it would help addressing such issues earlier on.
- Having one on one meetings with team members will be helpful to give feedback or receive feedback. Also to understand what factors motivate an individual?
- Also based on the feedback received by the interviewees who rated empathy being used at medium level, the manager may understand the view point of the others but sometimes may not be able to approve or accommodate some of the requests.

Effective Communication

Effective communication is an essential strategy rated to being used highly by seven out of eight interviewees. The remaining interviewee rated it at medium level as there is more room for improvement.

- Effective communication is very important according to the interviewees. A manager may have to repeat or rephrase until it is assured that the message is passed across accurately.
- Also taking notes and sharing the screen while taking those to ensure what's recorded is visible to others could help with accuracy of information being recorded at the meetings.
- Team members are experts in their own. Therefore it is important to hear others and give them chance to speak. Because collective knowhow is broader as a team than individuals.
- When a manager is focused on tasks due to time pressure and criticality it's possible for team members to feel not heard/not listen to. Therefore it's important to acknowledge people and their opinions and deal with those in a timely manner.
- Manager can act as the bridge between team members to talk to each other and bring them together to address tasks/challenges in hand.

Meetings/Motivation

All interviewees have mentioned that they motivate team members to actively participate in the meetings and following mechanisms are recorded based on the feedback.

- Having an agenda for meetings and making it clear for everyone invited.
- Communicating the elements of agenda to respective individuals prior to the meeting if they need to contribute during the meeting.
- During the meetings to check how much the audience is present and how they are feeling and what kind of contribution they are doing for the meeting.
- When people need to be responsible, recording action points and sharing them with the audience. The action items to be followed up afterwards.
- Give everyone fair opportunities and encouragement to speak during the meetings. This would help to convey that each team member is important.
- Having retrospective meetings to agree on ways of working/processes. Taking actions accordingly based on what's agreed.

Conflict Resolution

Following table depicts the summary of conflict resolution strategies used by the eight interviewees based on the feedback given.

Table 30. Summary of conflict resolution strategies used

Interviewee	Conflict Resolution Strategy/s Used
1	Mostly collaborative or accommodative approaches are used.
2	Mostly collaborative. Sometimes forcing
3	A mix of collaborative and compromising strategies
4	Collaborative or compromise strategy is used. Forcing definitely not used.
5	Collaborative or compromise strategy is used
6	Accommodative. Sometimes collaborative
7	Mainly collaborative. Forcing is not used
8	Mainly collaborative. Forcing is not used.

According to the data collaborative strategy is the most used strategy for conflict resolution and it is being used by all the interviewees. Only one interviewee reported of using forcing approach sometimes, and that is used when some of the top management decisions needs to be implemented. Three interviewees has mentioned to use compromise approach along with the collaborative approach. Two interviewees use either collaborative or accommodative approaches. No interviewee has reported to use the avoidant strategy.

Other Strategies

Following are the other strategies used by the interviewees according to the feedback received. Some of the strategies are mentioned by multiple interviewees as included in the empirical data.

- Developing trust within the team
- Fostering openness within the team
- Developing a safe environment. It is important to consider what constitutes a safe environment for different cultures.
- Encouraging to give informal feedback to one another in the team. Focus is on giving constructive feedback for individual growth and be open to receive feedback.
- Having common goals to achieve as a team. This would help to keep the team spirit high. Once the goals are achieved, motivation will go up further.
- Doing team meet ups in a physical setting if possible. The teams who have done this have experienced a great relationship and trust development among team members.

- The teams who have been together for a longer period has developed greater personal touch and friendliness. This helps to get rid of many challenges and reducing conflicts. Therefore understanding these development takes time and providing the necessary environment for that is important.
- Giving space for the team to be self-organized and giving them many platforms to collaborate virtually. The self-organized team is quite good at resolving their own challenges and asking for help if required.
- Agreeing on certain principles to follow as a team for areas such as product/process quality. This helps to make the team accountable as a whole.

5 Conclusion

5.1 Summary of the key empirical findings

This study has identified a list of challenges faced by CCVTs due to the virtual and cross cultural nature of the teams. The results of the empirical data analysis shows that empathy, effective communication, addressing elements of motivation and collaborative conflict resolution strategies help reducing overall challenges in communication, reducing frequency of conflicts and motivation issues in CCVTs.

In CCVTs challenges persists because between cultures, as there are different ways of understanding and portraying things across cultures. While people from some cultures tend to be straightforward in communication and giving feedback others could be more reserved. This could be challenging for communication and engagement. Virtual teams get less or no opportunities to work together in the same physical space. This results tasks getting longer time to complete, delay in responses and relationship building challenges. Team members could easily get distracted by emails and chat messages while connected to meetings. Visual impressions of communication could be missing or limited in virtual meetings. As virtual team work demands frequent meetings within the team it could be exhausting and could impact motivation and energy levels.

To address these challenges it is important to understand that CCVTs managers being aware of these challenges and take necessary steps to address those. A CCVT manager needs to possess cross cultural awareness and empathy. This helps to understand team members and support them. Systematic management of team meetings and communication is highly necessary to make the meetings fruitful and to keep the motivation and energy levels high. Also it is important to give all team members equal opportunity to speak during meetings. CCVT manager should take necessary steps to identify and address elements of motivation of CCVT team members. In Conflicting situations applying collaborative conflict resolution strategy will help reaching resolutions. Additionally if

the team can be given opportunities to meet physically at some instances that also could boost trust levels and strength of relationships within the CCVT.

5.2 Validation of the theoretical framework and research propositions

Preposition 1: Cross-cultural awareness/empathy reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

As mentioned in the section 4.4.2 five out of eight interviewees rated empathy is being highly used as a mechanism to address CCVT challenges. Three rated it as being used at medium rate. Therefore all the interviewees use this mechanism. Also based on the empirical data openness and interest to learn about others cultures is a special skill a CCVT manger needs to develop and the having knowledge on team members' cultures helps in connecting with and managing them. Hence this preposition is valid.

Pauleen and Yoong (2001, p. 215) state that "cultural tolerance and empathy" are fundamental prerequisites for open communication in cross-cultural teams. Connaughton and Shuffler (2007, p. 396) state that learning the cultural reasoning behind of others' varying beliefs help to work together effectively. Hence it is evident that findings on this preposition is similar to findings of prior literature.

Preposition 2: Systematic management of team communication helps reducing challenges in cross-cultural teams

Effective communication is rated as a highly used mechanism in CCVT management by seven out of eight interviewees. A set of best practices being used by the interviewees for effective communication and better management of team meetings are listed down in section 4.4.2. According to the empirical data applying those practices have helped the respective teams reducing the communication challenges and make it more effective. Hence this preposition is valid.

Prior research suggest that frequency and complexity of team communication need to be managed by the facilitators of the virtual teams (Collins & Remmers, 1997; Pauleen & Yoong, 2001; Lilian, 2014; Lisak & Erez, 2015). According to Sakar and Sahay (2003) collaboration of virtual teams do not occur merely after the enabling technologies are made to be in place. Author's state that it requires a lot of systematic effort for a team to develop up to collaboration stage which align communicative actions, team structural characteristics and interaction modalities. It is confirmed by the empirical data of this study as the CCVTs mangers have utilised a number of mechanism to develop and maintain effective communication within the teams. Therefore the findings of this study is similar to the findings of prior literature.

Preposition 3: Addressing elements of motivation (Valence, instrumentality, self-efficacy and trust) reduces challenges in cross cultural virtual teams.

According to (Cagiltay et al., 2015, p.9) team members from individualistic cultures tend to have more self-efficacy compared to the individuals from collectivist cultures. However through a feedback and a training mechanism self-efficacy can be developed Geister et al. (2006). Empirical data shows that motivational factors differ between cultures. These could be intrinsic or extrinsic factors. Also data shows that having one to one meetings have helped to identify and address the motivational factors of individuals.

Virtual communication might impact reduction of trust and Team Corporation and facilitating face to face meetings and encouraging informal communication among the team members will help to uplift the trust Geister et al. (2006). Developing trust within the team is an important, rather an essential strategy as mentioned by several interviewees and listed as a best practice in section 4.4.2. Empirical data confirms that encouraging informal communication have helped improving motivation. Also teams who have met physically have reported that it has helped to develop team bonds and trust levels.

Findings of this study is similar to findings of the prior literature. Hence this preposition is valid.

Proposition 4: Training of CCVT facilitators reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

Williams, et al. (2001) state that facilitation in virtual cross-cultural settings is a very difficult undertaking and questioning, encouraging involvement, attending interpersonal and group dynamics, understanding expectations from the facilitator and revealing fears are some of the primary challenges CCVT facilitators face. The empirical data shows that the interviewees face these challenges. However they cope up with these challenges through on the job training and experience obtained via working in multiple CCVTs over the years.

Rosen et al. (2006) suggest that team leaders of virtual teams need to develop special skills through suitable trainings to facilitate such teams (Rosen et al., 2006).

None of the interviewees out of the eight have received any special training on managing CCVTs. Also self-learning out of interest have helped gain knowledge on CCVT management to some of the interviewees. It is mentioned that a training could help lay initial foundation mainly actual work will help to learn in better managing CCVTs.

Therefore findings of this study with regards to this preposition is different to findings of prior literature. Hence it is concluded that this preposition is not valid.

Proposition 5: Using collaborative conflict resolution strategy reduces challenges (i.e. helps in managing) in cross-cultural virtual teams.

According to Cagiltay et al. (2015, p. 11) if a dispute situation arise in a CCVT, the team lead/facilitator should have the expertise on how to use conflict resolution techniques

effectively. The facilitator should be able to address issues and ambiguities, avoid taking sides, provide clear guidelines and direct the team towards a resolution.

According to the empirical data all the teams have lower occurrence of conflicts (rated 1 or 2 by 7 interviewees). Conflicts are noted to occur during stressful periods of projects. As mentioned in section 4.4.2 all interviewees use conflict resolution strategies. The collaborative strategy is the most used conflict resolution strategy and it is being used by all the eight interviewees. This approach has helped teams to resolve conflicts.

Therefore it is evident that findings of this study is similar to findings of prior research. Hence this preposition is valid.

Finally it can conclude that four prepositions mentioned in the research modal are valid.

Out of the challenges mentioned in the research modal, non-verbal communication difficulty, conflicts, lack of motivation due to visual presence, addressing individual motivational factors are confirmed as challenges in empirical data. Difficulty in using communication technology is not mentioned as a challenge by any of the interviewees. Hence it can be opted out. Therefore the challenges mentioned in the research model are updated accordingly.

After validation with empirical data the updated research model can be depicted as below.

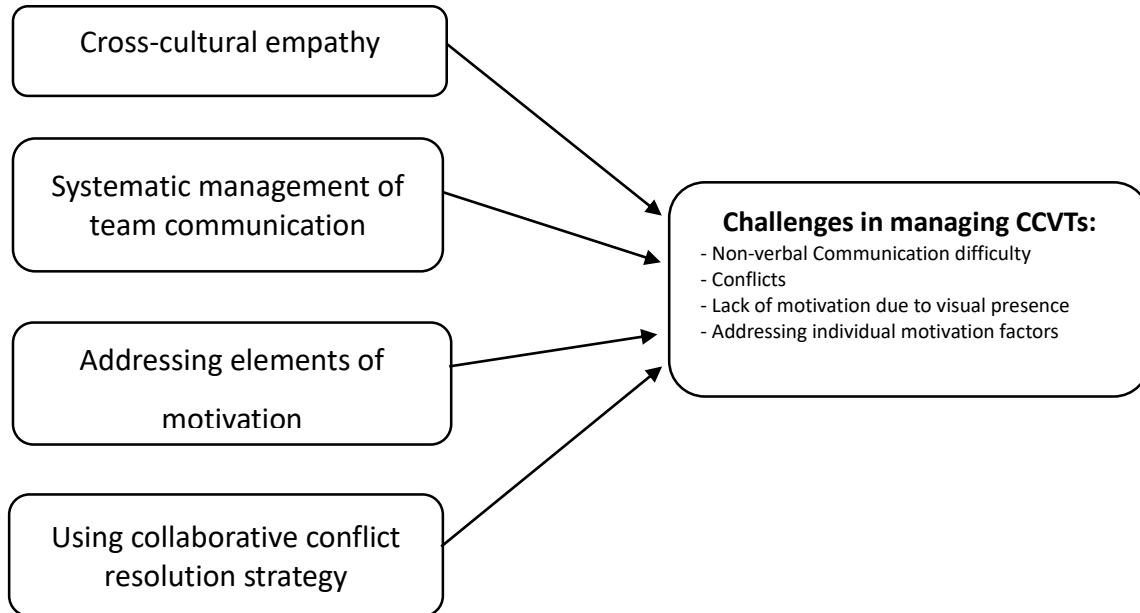


Figure 2. Validated model of mechanisms for reducing (i.e. managing) challenges in cross-cultural virtual teams.

5.3 Managerial implications

Based on the feedback received from the interviewees of this study there is a list of skills identified as special skills needed to manage a CCVT successfully as a CCVT operate different to a conventional collocated team.

A CCVT manager should be an empathetic person with good listening skills. It's also important to be approachable making it easier for the team to open up to the manager. Some understanding on team psychology also will be helpful.

Also it is important that a CCVT manager being an open minded person as cultural aspects play quite an important role in a CCVT. One has to be aware of cultural differences and understand that you cannot impose your style on others. Being interested in learning

about other cultures will be greatly beneficial in managing a CCVT. Once interested, one will be open to learning and connecting with people across cultures.

Effective communication skills are highly important has rated by the interviewees of the study. Being open for discussions and respecting other's views is also essential.

Since the communication and collaboration happen virtually a CCVT manager should have the technical competency to use the various tools being used for those purposes. Time management is also an important skill as it is common that CCVTs have various meetings at a high frequency such as several times a day which is also confirmed by the empirical data. Manager needs to possess the ability to keep the people engaged during these meetings using various mechanisms.

5.4 Directions for future research

The five organizations considered in this study are operating at a wider international level with large diverse employee bases. Also except for the organization in financial services rest of the four organizations are in forefront of technological industries. Cross-cultural and virtual team work had been commonly done in these organizations and there is a wide level of organizational experience in CCVTs. Employees in these organizations are used to the tools which are being used for virtual team work and practices around such team work.

However despite having CCVTs commonly, based on the empirical data it is identified that managers have not received any special trainings on managing CCVTs. Also team members have not received any special trainings on how to work and contribute optimally to these teams. All the teams' studied have acquired that knowhow through on the job training, experience and self-learning.

Therefore one future reach area would be how the trainings can be designed to support acquiring skills required to manage such teams and also to effectively contribute to

CCVTs as team members. Such Trainings can lay a good foundation for someone starting to work in CCVTs which can then be further developed through practical experience.

5.5 Limitations

This study was conducted between eight interviewees representing five international companies from Finland. The teams consisted team members located in Europe (Specially Nordics), India and China mainly. Additionally there were team members located in East Asia in some teams. Hence predominantly the teams consisted of team members located in Europe and Asia. Nationalities of the team members were also noticed as European and Asian mainly. Therefore the stated cultural backgrounds and the challenges identified, represent Europe and Asia predominantly. While the same challenges could be applicable to the remaining regions of the globe (North and South America, Africa, Middle East, Australia & NZ) the empirical data does not represent those locations and cultures.

6 References

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Appendices

Appendix 1. Interview Guide

SECTION A: Your introduction

Tell me about yourself:

- 1) Your name: _____
- 2) Your job title: _____
- 3) Number of years in current job with this company: _____
- 4) Your experience in managing cross-cultural virtual teams (in years): _____
- 5) Number of cross-cultural virtual teams you have managed so far: _____

SECTION B: Your company information

Tell me about your company:

- 4) Your company name: _____
- 5) Primary industry of your company: _____
- 6) Number of employees in your company: _____
- 7) Annual turnover of your company in 2023 (in million euros): _____

SECTION C: Information about project team and faced management challenges

Tell me about your project team:

- 8) What product/service your team delivers and to whom it delivers? _____
- 9) Size of your project team (number of team members): _____
- 10) Geographical distribution of your team members: _____
- 11) When was the team formed? _____
- 12) For how long this team would continue working: _____
- 13) Number of nationalities in your team?: _____
- 14) Which tool do you use for communication with you team members (e.g. Zoom, teams, etc): _____
- 15) How often do you communicate with your team members? _____
- 16) Kindly elaborate that what kind of communication challenges you face with your team members due to cultural differences or virtual nature of your team.
How do you rate the overall quality of communication (verbal and non-verbal) with your team members considering the cultural differences or virtual nature of your team? (Very low 1-5 Very high).

- 17) Kindly elaborate the nature of conflicts (frequency and intensity) between team members due to cultural differences or virtual nature of your team.
How do you rate the frequency of conflicts within your team members considering the cultural differences or virtual nature of your team?
(Very low 1-5 Very high).
- 18) Kindly elaborate the overall motivation/energy of members during meetings and reasons behind this level of motivation?
How do you rate the overall motivation/energy of your team members during the virtual meetings? (Very low 1-5 Very high).
- 19) How difficult it is for you to address the underlying reasons of team members' demotivation? (Very low 1-5 Very high). Can you elaborate why it is like this?
- 20) What other challenges do you face in managing cross-cultural virtual teams?

SECTION E: Mechanisms to manage challenges in cross-cultural virtual teams

21) Kindly indicate that what strategies/mechanisms you have used to manage potential/faced challenges in cross-cultural virtual teams. A general list of proposed strategies/mechanism is given below.

- a) Using empathy - understanding the point of view, and feelings of team members (no/yes – If yes, then rate the level of used empathy: low, medium, high)
- b) Using effective communication: Speak clearly and articulately and listen to the thoughts of other members calmly? (no/yes – If yes, then rate the effective communication: low, medium, high)
- c) Getting training for managing cross-cultural teams (no/yes). In your opinion what are the special skills a manager of a CCVT needs to build?
- d) Ensuring that other members are trained for working in cross-cultural teams (no/yes).
- e) Motivating team members for active participation and fulfilling their responsibilities (no/yes). What approaches do you use in motivating your team members to be active during meetings and be responsible?
- f) Resolving conflicts between member (yes/no). Which conflict resolution strategy do you often use to solve conflicts: forcing, collaborative, compromising, avoiding, and accommodative.
- g) Other strategies for effectively managing the challenges in CCVTs (e.g. developing trust, encourage informal virtual meetings, etc.).

SECTION F: Outcomes

22a) How satisfied are you with the performance of your team? (Very low 1-5 Very high)

22b) How satisfactory is your relationship with your team members? (Very low 1-5 Very high)

22c) How satisfied are you with the used mechanisms for managing challenges in CCVTs? (Very low 1-5 Very high)