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Communication of technical processes between country offices and headquarters in a multinational company

Matias Kari

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Author Matias Kari	
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Thesis supervisor University Lecturer Jari Ylitalo, D.Sc. (Tech)	
Thesis advisors Taru Saariperä, M.Sc. (Econ.) & Danja Karenko, M.A.	
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Abstract

Technology companies from all over the world are growing to global scale at a fast pace, leading to ever-increasing demand for efficient technology and policies for multinational and multicultural communication and collaboration. The company leaders in the headquarters must provide a framework for how this collaboration should happen, but how can they account for all the differences in preferences of working culture that each of their offices in other countries present? This thesis features a single-case study of a multinational company in the information technology industry. It provides insight into the subject directly from representatives of the country offices by utilizing thematic interviews to gather their perceptions about a type of technical process that requires efficient multicultural collaboration and communication. The main research subjects are how the representatives feel about the current state of collaboration and communication, as well as investigating what kinds of differences there are between working cultures and preferences in different country offices. The results of the study indicate, above all, a need for clear communication that is unambiguous, up to date, and archived in a way that can be browsed easily. Additionally, the study confirms the effectiveness of multicultural team creation guidelines created by previous literature and highlights the usefulness of utilizing time zones for optimized workflow.

Keywords multicultural collaboration, global communication, communication technology, multicultural leadership

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Tiivistelmä

Teknologiayritykset ympäri maailman kasvavat nopealla tahdilla maailmanlaajuisiksi. Tämä saa aikaan jatkuvasti kasvavan tarpeen tehokkaille ja toimiville teknologiaratkaisuille ja toimintamalleille, joilla maiden välistä monikulttuurista yhteistyötä ja viestintää voi tehostaa. Yritysten johtoportaan vastuulle jää tuohon yhteistyöhön liittyvien toimintamallien ja puitteiden luominen, mutta miten he voivat ottaa eri maiden erilaisten työkulttuurien ominaisuudet ja mieltymykset huomioon? Tämä diplomityö tutkii yksittäistä informaatioteknologia-alan yritystä hyödyntäen tapaustutkimusmetodia. Useiden maatoimistojen edustajat antavat oman näkemyksensä aiheesta liittyen tekniseen prosessiin, joka vaatii tehokasta monikulttuurista ja kansainvälistä yhteistyötä ja viestintää. Näitä näkemyksiä tulkitaan teemahaastattelumetodin avulla. Tutkimus keskittyy erityisesti maatoimistojen edustajien näkemyksiin nykyisen viestinnän ja yhteistyön toimivuudesta sekä työskentelykulttuurien ja mieltymysten eroista eri maatoimistojen välillä. Tutkimuksen tulokset korostavat erityisesti selkeän, yksiselitteisen ja ajantasaisen viestinnän tärkeyttä sekä tiedon arkistointia helposti selattavaan muotoon. Tutkimus myös vahvistaa aiemman kirjallisuuden esiintuomat suositukset monikulttuurisen työryhmän luomiseen sekä tuo esiin aikavyöhykkeiden hyödyntämisen projektien tehokkuuden optimoimiseksi.

Avainsanat monikulttuurinen yhteistyö, maailmanlaajuinen viestintä, viestintäteknologia, monikulttuurinen johtaminen

Contents

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Espoo, 24 July 2023
Matias Kari

1 Introduction

1.1 Background and motivation

The number of multi-national corporations in the world is rising, and consequently multicultural project teams are becoming more common. Studying the effects of multiculturality on communication and collaboration of technical projects is important for improving the efficiency of these project teams, as well as for creating a working environment where employees from different cultures are able to utilize their strengths and thrive. This thesis showcases the current situation of one multi-national IT company from Finland and provides a country office point of view into the preferred ways of communication and collaboration across continents and time zones.

1.2 Research objective, questions, and scope

The objective for the thesis is to create a complete picture of how employees from different country offices find the current state of collaboration and communication in a specific technical process. The results will be utilized for improving that specific technical process, benefiting the company in question. Then, the goal is to interpret the findings to provide results that are applicable more generally to multicultural projects in other kinds of projects and companies. The relationship between country offices and headquarters is not a subject of many studies, which is evident in Section 2.3 of this thesis. This is a problem that this thesis aims to improve.

This thesis observes multicultural collaboration in technical projects from two perspectives.

The first research question is:

How do offices in other countries perceive the communication and its functionality between them and the HQ in Finland?

The second research question is:

What are the main differences and similarities between the country offices in terms of communication?

These two questions aim to provide a comprehensive view of how employees in country offices perceive the current state of multicultural communication and collaboration in the specific technical process. Based on this view, suggestions for improvement and general guidelines about creating a well-functioning multicultural project team can be made.

1.3 Structure of the thesis

This thesis is divided into five chapters. Chapter 1 provides the introduction, background, motivation, objective, and research questions for the thesis. Chapter 2 presents findings from previous literature on the topic. The literature touches upon the effect of multiculturality and communication technology on multinational technical projects, as well as what we know about the relationships between country offices and headquarters in multinational companies. Chapter 3 provides context, research approach, and data collection and analysis methods for the study. Chapter 4 explains the current practical context of the study, after which it presents the findings of the study. Chapter 5 gathers the findings and implications, contributions, and limitations, as well as conclusions of the study.

2 Literature review

In this chapter I provide the theoretical framework for my study. First, I describe literature regarding the effect of multiculturality on collaboration, communication, and coordination of project teams inside a company. Second, I investigate the effect of technology on the functioning of those teams. Finally, I show previous research on the relationship of foreign offices with their headquarters. I chose this approach due to the high effect that technology has on multicultural communication in this particular study. The purpose of this chapter is to utilize prior research to support the findings of my study. Alternatively, this chapter can function as a reference point for comparison, should the findings of my study differ significantly from previous literature. In the conclusions chapter I evaluate how the literature and the study compare to each other.

2.1 Effect of multicultural collaboration on internal communication of an organization

Multicultural teams are getting more common in knowledge-intensive work (Ochieng & Price, 2009). They are considered to out-perform monocultural teams when a project requires a wide selection of skills and judgement (Earley & Mosakowski, 2000). According to Chew & Horwitz (2004), globalization, new technology, growth of multinational corporations, mobility of labor, capital and technology and increased global competition, have led to Human Resource Management practices and Team Management practices becoming increasingly intertwined. In recent years, the prevalence of literature concerning management of multicultural project teams has increased significantly, with the emphasis on the positive effects of the teams (Ochieng & Price, 2009). In several contexts, including these knowledge-intensive teams and their interactions with the external environment, the concept of integrating knowledge from different cultures has been applied, also known as "boundary spanning" (Ancona & Caldwell, 1992). Boundary spanning has also been applied to interactions between units within multinational corporations (Au & Fukuda, 2002), and to global collaboration (Søderberg & Romani, 2017). These interactions between units within a multinational corporation are the basis of this thesis.

When studying the effects of cultural differences between a country office and the headquarters of a multinational corporation, it is important to recognize the fact that a major part of published research assume a too high degree of cultural homogeneity within a country or other large collective regions, such as “the western world” (Chau & Nacharoenkul, 2023). Utilizing mean national values leads to perceiving more significant cultural differences than there are in reality, and to ignoring cultural variation within an individual country (Beugelsdijk et al., 2014). Neighboring countries may compare very similarly in some respects, and very differently in other aspects. This can lead to differences in the application of the common guidelines set by the headquarters (Chau & Nacharoenkul, 2023).

2.1.1 Effects of cultural heterogeneity

According to Earley & Mosakowski (2000), the cultural heterogeneity of a team has a significant effect on team performance, and teams that have unified cultures have an increased likelihood of better performance than other teams. A unified team culture facilitates internal communication (Oetzel, 1995), coordination and strategic action (Hackman, 1987), cohesiveness (Klimoski & Mohammed, 1994), and team efficacy (Bandura, 1997).

There are two situations where a unified team culture can occur the most naturally: in a highly culturally heterogenous team, and in a highly culturally homogenous team (Earley & Mosakowski, 2000). A highly heterogenous team does not naturally possess many common bases for formation of subgroups, self-categorization, and social identity, and thus, the members will attempt to establish an entirely new hybrid culture within the team, regarding communication methods, team member status, processes, and expectations of roles, for example (Earley & Mosakowski, 2000). There is no preexisting identity to easily fall back on due to a lack of commonalities among the team members (Earley & Mosakowski, 2000).

Earley & Mosakowski (2000) suggest that the creation of a unified team culture can depend on the following conditions: establishment of rules for interactions related to tasks and between team members, creation of expectations for team performance, development of a common team identity, and effective communication and conflict management. Additionally, they highlight the importance of cross-cultural empathy and understanding. In a multinational corporation with collaboration between country offices, these conditions might be defined by higher management within the headquarters, from their own cultural point of view. This is the case with the company featured in this thesis.

2.1.2 Risks of multinational communication

Projects with participants from multiple different cultures and nationalities face particular types of risks which can lead to decreased performance and satisfaction among team members. Lee et al. (2023) focused particularly on the communication-related risks in multinational projects, stating that the highest risk can be found in the categories of linguistic and cultural communication. These categories include risks like differences in terminology and technical standards, differences in meanings of visual gestures and nuances, and differences in pronunciation (Lee et al., 2023). Conversely, Lee et al. (2023) found that physical category risks, such as risks related to time differences between countries and decision complexity, were not highly impacted by cultural differences. In some cases, prejudices, stereotyping, and motives of individuals in a multicultural team can also have an adverse effect on team performance (Shaw, 1981).

Brett et al. (2007) elaborates on the risks of differences in nuances, terms, and understandability of communication. Accents and language fluency can cause problems when individual team members are not able to properly share their knowledge in the dominant language of the team (Brett et al., 2007). There are cultural differences in the use of direct versus indirect communication, leading to some team members using direct, explicit communication and others to, for example, asking questions instead of highlighting problems with the team leader (Brett et al., 2007). They continue that team members from cultures with a strong sense of hierarchy expect their status in the organization to affect how they are treated. Project team members often have differences in how quickly they make decisions and in how much analysis they might need beforehand. Finally, Brett et al. (2007) explain a potential communication risk caused by differences in preferences of decision-making speed, causing some to grow frustrated with those who need more time. By setting a common understanding of rules and expectations within the project team, a leader can help mitigate these risks (Emmitt & Gorse, 2007).

2.1.3 Role of the manager in a successful multinational project

In literature it seems popular to divide the responsibility of achieving a well-organized and well-communicating multicultural project team to three entities: the project leader or leaders, the project framework and circumstances set by the surrounding organization, and the individual team member. Out of the three, focusing on the critical role of the leader seemed the most popular.

Each culture has their own set of basic values, concepts, and assumptions, and it is a required skill of a project organizer or manager to understand and manage these differences (Kang et al., 2006). The interpersonal dynamics and communication patterns between team members of an international team will be more complicated than in a team consisting of people from only one culture (Davison, 1994). When managing a team consisting of individuals from different divisions of the same organization, the manager must first recognize these cultural differences (Ochieng & Price, 2009). It is common for managers of such teams to assume that the cultural differences of the individuals are unimportant, but this can lead to limited ability to manage the project, fragmentation of project delivery, and major divergence of working practices within the team (Ochieng & Price, 2009). According to Trompenaars & Hampden-Turner (1997), the most important cultural differences that should be considered when managing a team consisting of individuals from different country divisions of the same organization are national characteristics, ethnic differences, and organizational culture. For example, status and hierarchy can be very important in some countries, leading to a lack of empowerment of the more junior individuals within the project team (Ochieng & Price, 2009). Different cultures will have different approaches to work and decision-making, requiring a manager to adjust their communication based on their knowledge of these cultures (Wiseman et al., 1989).

A study conducted by Ochieng & Price (2009) suggested that the commitment of the client and the project manager in building cultural understanding through leadership is crucial in preventing the project team from developing their own working culture separate from the overall working culture of the organization. Interestingly, the study found that the technical skills of a project manager of a multicultural project within an organization are not as important as emotional intelligence leadership competencies, when building dynamic project teams (Ochieng & Price, 2009). The study established that during the initiation phase of such a multicultural project team, cross-cultural uncertainty can emerge within the team, which may lead to poor performance. This can be prevented by the project manager by articulating project goals, roles, and procedures and by possessing good interpersonal skills (Ochieng & Price, 2009).

According to Ochieng & Price (2009), the conditions and initiatives that most often lead to good multicultural team performance for the core team and the rest of the project team community are the following:

- Adherence of defined procedures
- Clear communication of procedures
- Development of effective people selection
- Ability to deal with cross-cultural integration
- A collective work plan

Naturally, cultural differences can also be found between managers of a multicultural project team. According to Schneider & DeMeyer (1991), the response of individual project managers to strategic issues and team tasks is likely to be different across different cultural backgrounds, because their perceptions of opportunities and threats caused by the environment differ among each other, as do their perceptions of internal strengths and weaknesses. This further strengthens the notion that cross cultural communication competence is a vital component of enabling a multicultural team to work effectively and facing common challenges that are present in such a team (Matveev & Walters, 2004).

2.1.4 Role of the organization in a successful multinational project

Several studies found that organizational structure plays a crucial role in enabling the managers of multicultural and multinational teams to better consider the cultural differences of team members and find solutions to improve the team's performance. The organizational structure should help managers to promote efficient decision making and to facilitate the flow of information by reducing verbal, organizational, and legal risks of communication (Lee et al., 2023). Open communication and constructive feedback processes can help project managers build a project environment that facilitates a co-operative culture pattern (Ochieng & Price, 2009). To achieve this, weekly meetings were found to be effective in keeping each team member informed of the status of the project and their individual role in the project. On the contrary, an ineffective communication strategy on the organizational level can cause tensions, conflict, and resentment between employees (Kennly and Florida, 1995). These problems may be triggered by differences in cultures.

Organizational structures can be categorized in three categories: functional, projectized, and matrix. Functional organizations are more rigid with emphasis on in-depth knowledge, standardized tasks, and great skill development, but this leads to reduced innovation, poor horizontal coordination, and slow response times among departments (Al-Rubaye and Mahjob, 2020). Projectized organizations are structured and staffed around specific projects, the structure is also known as the pure project structure, or project-based organization (San Cristóbal et al., 2018). The matrix organization structure can be considered a mix of the functional organization structure and the projectized organization structure, utilizing the strengths of each as it distributes authority among managers (Kerzner, 2017).

The best organizational structure to facilitate efficient information flow and high performance of multicultural teams was found to be the matrix due to its inherent flow of information between teams (Lee et al., 2023). This is clearly also applicable in multinational projects where individuals from different teams within the company gather for a one-time project, which is the case in this thesis. High flexibility in organizational structure can be highly beneficial in a competitive global context; a relatively flat organizational structure, such as a matrix organization, reduces layers of required bureaucracy, enabling quick decision-making (Chew & Horwitz, 2004).

To lay the foundation on a corporate structure level for successful multicultural projects, I bring up a study by Chew & Horwitz (2004). They performed a study of strategic HR practices, processes, and their outcomes with the employees of numerous large multi-national corporations (MNCs). They found that the practices that employees in almost all of the MNCs considered the most important were clearly defined core values that lay the foundation of the HR strategy, as well as prioritization of investment in internal human resource capacity building, although targeted recruitment strategies to buy in specific competencies were also considered vital by most of the MNCs. They continue to also list integrated staffing, and career and performance management programs as vital ingredients of a holistic HR strategy.

2.1.5 Role of the individual in a successful multinational project

Not all responsibility for a well-functioning multinational project team can be placed on the leaders or the organizational structure. The effort of each individual is also important. This includes cross-cultural trust, good interpersonal skills, and mutual respect for everyone in the project team (Ochieng & Price, 2009). Each person in the team should be motivated in such a way that they themselves want to do what is required (Weatherley, 2006). Naturally, project management and organizational structure can play a significant role in facilitating an environment where this intrinsic motivation of individual workers can happen. After establishing a level of interpersonal comfort and a common set of goals, individuals in the team can collect and share information, clarify tasks, and implement agreed-upon decisions (Davison, 1994). However, it must be noted that research highlighting the role of the individual as opposed to the role of the manager or the organizational structure was scarce in comparison.

2.2 Effect of technology on communication of an internal technical project in an organization

The nature of information technology is changing at an incredible speed (Sosa et al., 2002). The significant changes in the ways of organizational communication have been recognized by several researchers (Yates & Orlikowski, 1992). As new electronic methods of remote communication, team management, and knowledge-sharing are created, the reliance on face-to-face communication decreases (Sproull & Kiesler, 1992). However, not all communication should be replaced by remote tools.

2.2.1 Strengths and potential of virtual communication

Virtual teams can achieve similar levels of performance as face-to-face teams, when given enough time to develop intragroup relationships and to adapt to the communication tools (Chidambaram, 1996). Using occasional traditional meetings, preferably in an early stage in the lifespan of the team, can supplement in team building and sense of belongingness, which expedites the process of getting virtual teams up to par with face-to-face teams (Warkentin et al., 1997).

Online communication technology significantly affects the frequency and speed of cross-cultural communication in a professional and private setting, leading to differences in how comprehensively knowledge is shared (Sosa et al., 2002). The most significant factor that decreases the frequency of communication has been found to be the distance between the people communicating. However, choice of communication tools can help mitigate this effect. Communication technology is constantly evolving, and this development increasingly allows individuals from differing cultures to communicate with each other quickly and efficiently (St Amant, 2002). However, this ability to communicate internationally in an instant can also lead to amplification of rhetorical differences and misunderstandings between cultures.

Criticality of tasks and strength of organizational bonds were found to have a positive correlation with an increase in communication frequency, but neither factor was found to affect the choice of communication medium (Sosa et al., 2002). Instead, people involved with critical tasks or people who have a strong organizational bond appear to engage in a broad spectrum of communication methods. This effect was found to be true regardless of whether the people worked primarily remotely or in-person. Sosa et al. (2002) highlight the importance of a project manager, who can facilitate these circumstances even in a multinational project team by making sure everyone in the team understands the importance of the task and can identify critical task dependencies. Overall, while this type of effective communication is found to enable employees to work more effectively towards a common objective and build better relationships between each other, it is also found to lead to greater job satisfaction for individuals (Adu-Oppong & Agyin-Birikorang, 2014), organizational resilience, and higher performance for the organization as a whole (Bui et al., 2019).

St Amant (2002) mention a model that would utilize the geographical separation of members of virtual teams to achieve production facilities to "remain open 24 hours a day, seven days a week". In the model, workers would share their projects with their colleagues in the following time zones, and the colleagues would then continue the work when the original workers end their workday, effectively creating a "cyberfactory that never closes". With the widespread introduction of modern virtual communication technology in 2023, this approach is not only possible to implement from a technical standpoint but was also suggested by several of the interviewees featured in this thesis. They dubbed it "Following the Sun".

2.2.2 Constraints of virtual communication and tools

Virtual teams tend to be more task-oriented due to the different nature of communication, leading also to decreased flow of social-emotional information and slowing down of relationship-forming between team members (Chidambaram, 1996). Virtual communication tools impose constraints on communication that are likely to impact a group's performance (Warkentin et al., 1997). One of the main constraints is the lack of paraverbal and nonverbal cues, such as tone of voice, inflection, facial expression, hand gestures, and body language. As with helping to avoid decreased frequency of communication, modern communication tools such as video calls can help mitigate this problem (Warkentin et al., 1997). Additionally, when utilizing text-based communication, the constraints of lacking facial expression and hand gestures among other things can be mitigated using emoji. This practice is becoming increasingly common even in corporate settings.

Team members who must communicate in a language that is not their first language tend to prefer text-based asynchronous communication over voice-based synchronous communication (Sosa et al., 2002). Utilizing text-based communication like email lets team members to thoroughly craft their message to reduce the risk of misunderstandings and missing or incorrect information. These findings can be extrapolated to 2023 to include other text-based communication methods such as Slack messages.

2.3 The relationship between a foreign office and the headquarters

Research directly related to the relationship between a foreign office and the headquarters of a multinational company is less common than the effects of multiculturality and technology on projects within a company. However, a majority of the information related to the effect of multiculturality can be utilized to craft adequate working principles to facilitate better performance and collaboration between a foreign office and the headquarters of a multinational company.

Chew & Horwitz (2004) conducted a survey case study to identify which cross-cultural values were the most important to the employees of a multinational corporation, as well as their goals and sources of motivation. They then utilized these results to create a set of strategic principles for their international operations, including customer-centered actions, learning as key to continuous improvement, and creating worldwide capabilities based on co-operation trust, integrity, mutual respect, and open communications. They recognized that local culture and needs of individual country offices can differ internationally, with the headquarters creating a set of common HR strategy guidelines.

Kadam et al. (2022) highlight the effect of local cultural aspects that a country office understands but the headquarters does not. They explain that understanding these aspects has a major impact on the customer relationship, leading to an increased likelihood of commercial success in the area. At times, these country office perspectives can conflict with the global guidelines set by the headquarters, but for the country office relationship to be efficient and effective, the views and guidelines of each party need to be adjusted and made compatible over time.

3 Research material and methods

In this chapter I describe the research methodology utilized in the study. First, I provide the context of the study, describing the company and technical process that the interviewees are involved with. Second, I explain the research approach: goals, considerations, research methods, and steps taken. Third, I describe the practicalities of data collection, including the interview structure and interviewee selection. Fourth, I tell how the data was analyzed. Finally, I list possible limitations related to the study.

3.1 Research context

The interviews were conducted with employees of a company that develops information technology solutions for other companies worldwide. The company has customer companies in all six continents and has branched out from the headquarters in Finland to many of these continents by establishing offices in central locations to better be able to support these customers. As shown in Figure 1 below, the country offices around the world have active communication, collaboration, and interaction with the headquarters in Finland, but less active with each other. If a region has multiple offices in different locations, those offices often work together as a unit that then as a whole interacts with the headquarters.

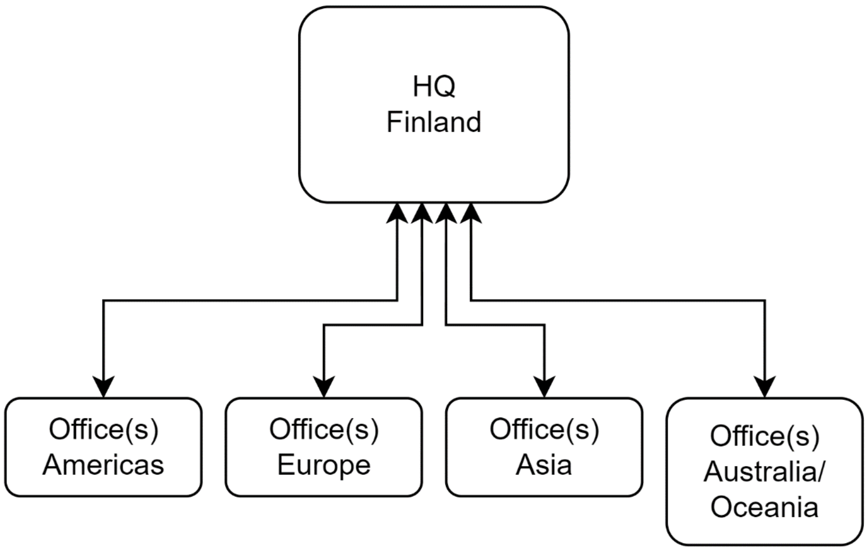

Figure 1: Relationships and interaction of headquarters and country offices

One of the solutions created by the company – the one relevant to this study – is a software that can be accessed and operated through a web browser, with a majority of the functionality happening in the backend within the company's own software architecture. This study examines the collaboration and communication between the country offices and the headquarters during a technical process where the backend of a customer's environment is migrated from an old architecture to a new one and simultaneously upgraded to the latest version. First, a project organizer in the country office that corresponds to the customer agrees on a plan for the schedule and technical steps with the customer. Second, a technical expert appointed to the country office prepares the customer environments to increase compatibility with the new infrastructure. Third, a technical expert from the Finnish headquarters performs the migration to the new infrastructure. Finally, all parties involved validate the changes and troubleshoot if problems arise. The process requires constant collaboration and communication between all parties, with the country office project organizer functioning as the multinational project team manager that was frequently mentioned by previous literature.

3.2 Research approach

The goal of the study is to create a comprehensive picture of the current state of collaboration and communication between the country offices and headquarters regarding the technical process of the aforementioned environment migrations, and to find commonalities and differences in the improvement wishes of the country offices and gather them into an actionable plan for improvement. Additionally, the goal is to increase the amount of available research on the topic that is quickly increasing in relevancy along with the development of increasingly efficient communication technologies.

The study attempts to consider all sides of the collaboration: country offices, headquarters, project managers, individual project team members, and the company as a whole. As defined in the Introduction section, the research questions are:

1. How do offices in other countries perceive the communication and its functionality between them and the HQ in Finland?
2. What are the main differences and similarities between the country offices in terms of communication?

The study was conducted as a qualitative single case study. The primary reason for selecting this type of study was to help the company in question gain information that would be useful in developing their functions further. The thesis was commissioned by this company. A qualitative approach was chosen because the primary subject of the study is international collaboration between humans, thus the most actionable data to gather is subjective statements directly from the people involved. A social constructivist approach is then utilized, where an objective reality is parsed together from the subjective views of multiple people (Andrews, 2012).

The study included several steps as shown in Figure 2 below. Firstly, after deciding on the study approach, I planned who I wanted to interview, what I wanted to learn from the interview, and how the interviews would be conducted. Second, I approached suitable interviewee candidates through a message on Slack, the company's internal messaging platform, and arranged schedules with those who agreed to participate. Third, I conducted the interviews utilizing a preplanned but loose structure that is shown in Appendix A. Based on the interview findings and apparent gaps in the specific knowledge of people in a particular role within the technical process, I adjusted the interviewee selection to gain a full picture. Fourth, I transcribed the interviews into text form utilizing the automatic transcriptions created by Microsoft Teams as a starting point. Fifth, I imported the transcriptions to a thematic labeling program called Atlas.ti and labeled quotes based on the topic. Sixth, I built broader themes of these topics and combined quotes from each interviewee under these themes. Seventh, using these quotes, I analyzed the themes. Finally, helped by supervisor feedback and my own discretion, I revised the themes and my analyses of the themes.

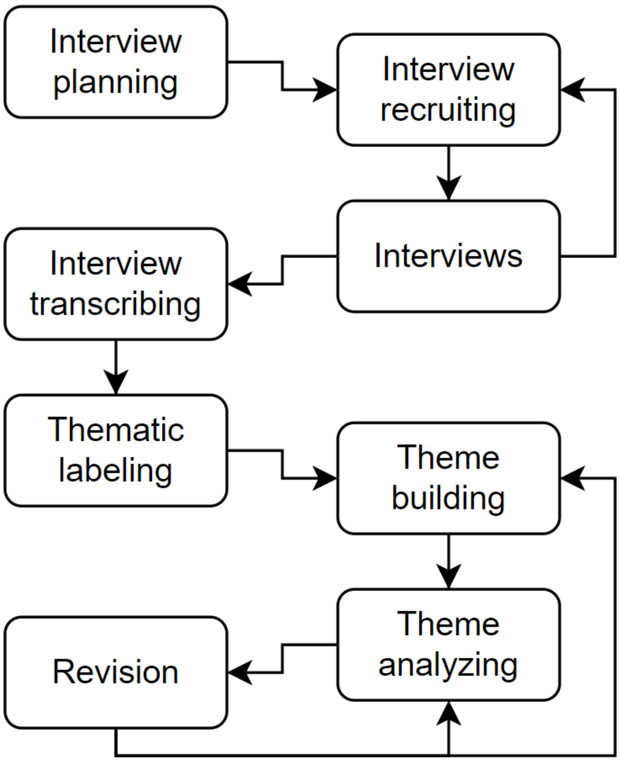

Figure 2: Steps of the study

3.3 Data collection

The interviews were conducted utilizing a semi-structured form. The pre-planned questions – shown in Appendix A – were utilized as a general structure, and as a reminder for myself of the important topics and data points. However, if the interviewee deviated from the topic onto a tangent, which included relevant or interesting information, I would encourage them to explain further, until finally directing the conversation back towards the intended structure of the interview. Such an interview type is also called a "thematic interview" (Eskola et al., 2018). Overall, I aimed to keep the interviews conversational and lighthearted to facilitate a relaxed atmosphere. The emphasis of the interviews was to focus on the communication relationship between the Finnish headquarters and the country offices, not on the technical architecture migrations specifically.

The interview structure was divided into several parts. The interviews began with some easy general questions to warm up, continued by gauging how deep their involvement is in the technical architecture migration processes. The following questions were focused on commonly used communication tools, after which I asked questions specifically about the communication between the Finnish headquarters and their own country office. Finally, I requested them to provide suggestions for concrete points of improvement.

The employees were selected based on two criteria: location, and involvement in the relevant process. Firstly, to be eligible for interview, the interviewee was required to be located in an office outside of Finland that hosts customers of their own. Secondly, the role of the interviewee must be such that they are deeply involved with product migrations from one software architecture to another, a particular technically and organizationally intensive process. Alternatively, an interviewee could be someone located in a central team in the Helsinki headquarters, who is regularly involved in the aforementioned product migration processes and would thus be able to provide an opposite point of view. Additionally, for interviewees in foreign countries, I attempted to choose participants that I had not personally worked with recently, to reduce bias caused by familiarity between interviewer and interviewee.

Four interviews in this thesis feature employees from Europe, North America, and Australia (interviews 2, 3, 4, and 7). Additionally, three interviews were conducted with employees in the Finland headquarters (interviews 1, 5, and 6). Demographically, the interviewees featured close to an even split between people presenting female and people presenting male. They also featured a varied age range, although mid to high 20's was more prevalent than others. A majority of the interviewees work in a role that is focused heavily on project coordination, organization, and communication. A smaller portion of the interviewees work in a predominantly technical role, which also requires communication regarding the practicalities of the technical processes. After conducting the first interview with an employee in a technical role, it was apparent that their involvement in the communication and planning of the process was minimal. Therefore, I decided to emphasize the project coordinator role in further interviewee selections.

The purpose of the project coordinator role is to serve as a connecting point for all information regarding the project, which made them ideal candidates for these interviews. They handle information flows between the Finnish headquarters, themselves, customer-facing technical teams, and the customers. Consequently, they regularly communicate and organize technical processes with people from several different countries, time zones and cultures. This provides them with a wide overall view of the entire process, and thus makes them ideal candidates for these interviews. In larger foreign offices, these coordinators report to a single leading coordinator, who is then in contact with the Finnish headquarters and organizes the projects on a higher level for the entire region.

3.4 Data analysis

The interviews were conducted as 1-on-1 interviews via Microsoft Teams, all of which I recorded for later transcription. The recordings were not made available to third parties. The transcriptions served as the primary sources for the Results section of this thesis. I extracted the data from the interviews by carefully reading each transcript and labeling individual quotes or sections with subject-specific tags, such as “Project coordination”, or “Problem”. The labeling process was done utilizing a qualitative analysis software named Atlas.ti. The goal of the labeling was to find recurring topics and themes across different interviews, which could then be combined under the same title in the thesis. After organizing quotes from the interviews under common themes, I analyzed the themes utilizing the quotes, theoretical sources, and my personal experiences, having worked in the same technical processes that I was investigating.

The data that was analyzed in this thesis is qualitative in nature. Thus, the method of data analysis utilized was the qualitative content analysis, aiming to create a comprehensive and generalizable picture of the phenomena in question, in a systematic and objective way (Tuomi & Sarajärvi, 2017). The information provided by the interviewees is their subjective view of the topic according to their personal understanding. To provide a more complete picture of the phenomena, I interpret the data based on context provided by other interviewees, my research of previous literature on the topic, and my own experience as an employee who is involved in the same processes as the interviewees. According to Laine (2018), this is a common approach in hermeneutics.

4 Findings

In this chapter I show the results of the empirical study. First, I describe the current situation, what communication tools are in use and how they are utilized, and how organizing and communicating the technical process intrinsic to the study is performed. Second, I showcase findings, opinions, and improvement suggestions that were discovered by interviewing people who are deeply involved with the technical process. These include opinions on the current state of communication, differences and similarities between country offices' ways of working, common reasons for occasional lack or incorrectness of information, and the most significant suggestion for improvement agreed upon by all interviewees.

Most communication and coordination of technical projects in the company are handled remotely via digital communication tools, even if team members work in the same office. The most significant reasons for this preference are information retention for future use, convenience, and working habits adopted during the forced remote working conditions of the COVID-19 pandemic. This leads to a situation where the nature of work sometimes differs very little between working within the local office and working internationally with other offices, the most significant difference being the differences in culture between the offices.

4.1 Communication tools in use

The interviewees who were interviewed for this thesis are familiar with utilizing the communication tools listed in Table 1 in their everyday work. Table 1 and Chapter 4.1 are not a comprehensive list of all communication tools in use at the company, they only include the ones mentioned in the interviews.

Table 1: Communication tools

Tool	Use case examples	Common problems
Jira Software (Atlassian)	Management of individual projects Collaboration and tracking	Number of tickets overwhelming People unreliable with updating ticket status
Slack (Slack Technologies)	Quick everyday conversations Organizing internal schedules	Only able to use internally Overlap in use with Teams Worse video call options than Teams
Email	Communication with customers	Information often not accessible to all necessary people
Teams (Microsoft)	Remote meetings Video conferences Communication with partner vendors	Overlap in use with Slack Worse text channel options than Slack
Smartsheet (Smartsheet Inc)	Management, scheduling, and overview of larger clusters of projects	
Confluence (Atlassian)	Process information sharing How-to pages Meeting notes	Pages are not kept up to date Technical instructions unclear and vague

4.1.1 Jira Software

Jira Software (henceforth referred to as just "Jira" in this thesis, unless otherwise specified) is a project management and issue tracking software tool, developed by Atlassian (Atlassian, n.d.). It can be utilized for planning and tracking software development projects. Jira is a tool widely utilized in software development, and other industries that require efficient project management and collaboration. A key feature of Jira is issue tracking, which enables teams to create, track, and prioritize issues and tasks throughout a development process (Atlassian, n.d.). Each issue, also known as a "ticket", can be assigned to a specific employee, categorized, and labeled for easy identification. Jira can be utilized for agile methodologies, such as Scrum and Kanban, by utilizing boards, and backlogs. Employees can mention each other and share comments and attachments in the comment section of a Jira ticket, which facilitates collaboration, communication, and retention of results of previous troubleshooting (Atlassian, n.d.). This promotes transparent and efficient communication within the project. Jira's functionality can be extended with plugins and integrations from the Atlassian Marketplace. These extensions can be utilized to add additional features and tailor Jira to the specific needs of a company.

In the technical processes that are examined in this thesis, Jira tickets are considered the primary form of communication in terms of information related to the specific technical tasks that must be performed to complete the processes. Jira may be utilized also for time and employee resource management communication, but for this purpose Slack is often considered the preferred option due to ease of use. A feature, which is considered a significant advantage of Jira by the interviewees of this thesis, is the ability to utilize it for effective technical communication directly with a customer. A customer can see the status of the ticket and provide immediate feedback and descriptions of possible technical issues directly to the technical people who are working on the customer's environments. The interviewees considered the number of Jira tickets to become too large at times, leading to difficulties in finding the relevant information.

4.1.2 Slack

Slack is a cloud-based tool utilized for quick form communication within the company (Slack, n.d.). Its features include real-time messaging, topic and team specific channels, ability to share files directly in messages, integration with external tools like Jira, voice and video calls, and a search function for old messages. In the process of a technical architecture migration, Slack is utilized in informing entire customer-specific channels about the overall plan, as well as each individual step of the process. Some customer-specific channels are established in Microsoft Teams instead, causing confusion. The interviewees expressed differing preferences between utilizing Slack versus Teams for customer-specific channels, but all agreed that concentrating all such channels to either one of the tools would be ideal.

Slack is praised by interviewees for its convenient and fast usability, as well as broad options for integrations with other software such as Jira. The most significant drawbacks are considered to be the difficulty of including collaborating partners from outside the company in the customer-specific channels and the functionality of video calls. A majority of interviewees prefer to utilize Teams for video calls and Slack for all text-based communication.

It is not always easy to understand which channel we should use for any customer, for example, once I created a channel for a particular customer because there was not a channel in Slack for them. Then the project manager for that customer told me to use Teams because we should share the communication to the partners and the partners could not access Slack.
Interviewee 7

I connected Jira to Slack, and I get pings there, I see all the updates, it's super convenient. And I connected it to the calendar, I see pings there also from the different meetings and everything. So, this is in Slack.
Interviewee 5

4.1.3 Microsoft Teams

Microsoft Teams is a platform for collaborative communication and teamwork (Microsoft, n.d.). Like Slack, it can be utilized for quick messaging, creating channels, video conferencing, and file sharing. It can be integrated with third-party applications, as well as Microsoft's own other applications like PowerPoint and Excel. Overall, Teams and Slack overlap with each other in functionality in many ways, with each application showcasing better usability in certain areas and worse in others.

The most significant advantage that Teams has over Slack is video conferencing, which is utilized across the board in the company of this study, regardless of which application is used for other communication regarding a particular customer. The video conferencing feature also includes a possibility for video recording and automatic text transcription, which can then be shared with necessary stakeholders after a conference. This feature hastened the interview analysis part of this thesis significantly. Other than video conferencing, a major advantage that Teams possesses over Slack is the ability to better include in the channels partner vendors from outside the company. These vendors might be instrumental in the daily running of a customer's environments, meaning that it is important to keep them informed about all the changes and procedures that are being performed.

We also have partner vendors, they're obviously not a part of our Slack internal channels. So, for that reason, we have Microsoft Teams. We can ping them on the channel, as we see that

"OK, we are going forward with this migration, do you have any problem with this?"
Interviewee 2

I like Teams for calls because you can record them, and you get the transcription and then you can share the recording with whoever. And I've even put recordings of meetings into [Jira] tickets. When we've had a problem, we go to talk about it and I'm like, "we'll record it".
Interviewee 3

4.1.4 Email

Email, short for electronic mail, is a virtual communication method that has existed for decades. It has been the staple of business communication for a majority of this time and is commonly utilized for contacting customers in a formal and professional manner. Nowadays, another major use for email is to serve as a channel for announcements via mailing lists that can often span entire companies. This is also a common use case in the company of this study. However, due to the difficulty of opting out of such mailing lists, interviewees expressed satisfaction with the recent development within the company of moving company-wide announcements to purpose-built Slack channels.

A major issue with email that was brought up by Interviewee 3 is the same problem that they blamed other private conversation tools for. The information is not accessible to anyone outside of the conversation and can easily lead to useful information being lost.

We keep far too much in email, instead of in tickets. The email back-and-forth is great when you never have to get anyone else involved, but the minute you have knowledge that somebody else could use, if it's not in either a FAQ database or within a [Jira] ticket that somebody can go and look at and find that information, we kind of stymie ourselves. I think if it involves any change to an environment, it should all be in Jira. We can search for problems. We can look for trends. You can export data, slice and dice it in so many different ways.
Interviewee 3

4.1.5 SmartSheet

SmartSheet is a platform for work management and team collaboration (SmartSheet, n.d.). It can be utilized to plan, track, and automate collaborative projects. Additionally, it can be utilized for document sharing, scheduling, and task management. It features a spreadsheet-like grid interface and is commonly utilized for project management in the company of this thesis. For the headquarters team responsible for technical architecture migrations, SmartSheet is the primary tool for planning the migration schedules, as well as communicating their current status with the country office teams responsible for the customer that is being migrated.

> *We have our migration SmartSheet and check that, "OK, which customers are soon to be starting their migration out", and so on.*
> Interviewee 6

4.1.6 Confluence

Confluence, colloquially known in the company as "internal wiki", is a knowledge management software tool developed by Atlassian (Atlassian, n.d.). The tool features a rich text editor that can be utilized for creating pages for documents, meeting notes, and project plans. For the company, it functions as a centralized platform for storing knowledge of technical details, instructions for technical and non-technical processes, and information about company guidelines, among other things. Relevant for the study, it contains change logs of new versions of the product software, as well as instructions of how to prepare a customer's environment for an architecture migration or a version upgrade. As highlighted by interviewee 5, these instructions have not always been clear and unambiguous enough.

> *Now it is getting better, and the latest release notes already include steps and scripts for if we need to change something, not just say "we have changed that" and that's it. So yeah, it is getting better and better.*
> Interviewee 5

Confluence contains instructions for all technical processes, as well as a specific page for each customer. Among other things, the customer-specific pages contain information about potential special setups and modifications that may have been made to the environments of that customer. Additionally, they contain instructions for special steps to consider when performing a version upgrade. However, often these pages are not maintained and kept up to date well enough, so they may contain outdated or irrelevant information. This can lead to technical problems when procedures such as migrations are made to the environments.

4.2 Current process of project communication and coordination

The process of a technical architecture migration features two kinds of employee roles: a technical role and a project management role. In its simplest form, the temporary multinational project team includes one team member of each type from both the Finnish headquarters and the country office involved. The project manager from headquarters will provide the project specifications and will plan the schedules and employee resource allocation with the project manager from the country office. After this, most of the communication is facilitated by the country office project manager, including keeping all parties aware of the current status of the migration, as well as renegotiating service break schedules with the customer, should that be needed. Technical communication is handled directly by the team members in the technical role, sometimes including direct communication with the customer.

> *Let's say there's this update happening and I'm not able to do it, then immediately I can contact the [project manager] to let him or her know that "is it OK if we just maybe postpone the change?" But of course, first the customer has to agree with this change freeze time and period.*
> Interviewee 2

One to two months before the actual process of architecture migration starts, a set of Jira tickets are created by the headquarters project manager to better communicate to the country office what needs to be done to prepare the environments for the migration. These tickets are then utilized also for keeping all members of the team aware of the current status of the project. Keeping all information related to the project in one specific place that is accessible to all necessary team members is a crucial part of ensuring the efficient flow of information. Clarity in messaging helps prevent misunderstandings caused by different levels of knowledge or different types of communication culture.

So, the main thing is to be very clear in every step we're doing. And to be on the same stage. If we're doing something or if something happens, we let the [country office] know, so they would be aware of what is going on.
Interviewee 5

In a larger country office that participates in several migrations simultaneously, it is common for all project managers of the office to report the status of their migrations to a single lead manager, who then meets with the headquarters team to sync the status of all migrations of the area at once. Often these sync-up meetings are organized biweekly. Additionally, scheduling of ongoing and upcoming migrations is discussed. Technical information about difficulties in a particular customer's environments are shared, but technical details are shared later in text form directly by the technical-oriented members of the team instead.

We talk about upcoming migration schedule. This is first priority. Some of the schedules only have a preliminary plan and then we need to confirm it, this is the most important thing. And we check the list of the customers that don't have a schedule, to ask "Hey, have you communicated with the customers yet? Do you have any big level plan at the moment?", and to check that information and try to figure out empty time slots for the unscheduled customers.
Interviewee 1

Sometimes, it might be unclear to a customer, why a migration or a version upgrade is necessary. This is often caused by a lack of understanding about the importance and benefits of the process, as well as the downsides of not performing the process. The upsides can include, for example, new features and bug fixes to the software, whereas the downsides can range from small bugs all the way to receiving no technical support for their software version. Thus, it is crucial that the headquarters team has provided the country office with sufficient knowledge of the importance of the migration or upgrade, allowing them to persuade the customer to agree to the upgrade process.

[We] contact the customer team to ask, "Can we schedule an upgrade or migration for the customer?", and then we settle down the time. Sometimes the customer will push back. They'll say they don't want to do the upgrade, then we need to explain to them what the upgrade means and what kind of downsides

there will be, and usually there's no downside, but only brings a better service for the customer. Then we must make sure every customer, [country office], and [headquarters team] have the same understanding about the task we are going to do.
Interviewee 1

Troubleshooting is one of the most important use cases of clear technical communication between teams and countries. During a process of architecture migration or version upgrade, the customer will typically report an issue to the project team manager of the country office, who then forwards the report to the headquarters' technical person who is assigned to the upgrade process. Outside of a migration or version upgrade process, the customers will contact the 24/7 Support team that operates from the headquarters. In either case, it is crucial for the success of the troubleshooting to write all details of the investigation in a uniform manner to decrease the possibility of misunderstandings, which could lead to unnecessary work or further technical problems. These details include, for example, an exact and comprehensive description of the error, and steps already taken. Writing the details in a uniform manner means following conventions and tool guidelines set by the senior management, such as utilizing Jira tickets for retaining the information related to the investigation.

- - this ticket has been escalated to us, then I'll have a look at the ticket to see what the 24/7 Support team have previously done, like read from the comments in the Jira ticket about what all has been established, like if they have found any more findings in that particular topic or if they need any more support.
Interviewee 2

4.3 Current state of project communication and coordination

4.3.1 How country offices perceive their communication with the headquarters

The overall state of communication between the country offices and the Finnish headquarters was found to be satisfactory, with some minor suggestions for improvement. This opinion was shared by interviewees in the Finnish headquarters and in the country offices. Over time, specific processes have been developed and implemented to each phase of the migration and version upgrade projects based on experience of what is necessary for efficient project management and communication. These processes include a set of clearly defined Jira tickets, which include instructions for each step of the process and indications of who should perform them. Additionally, praise was given for a request form, which is utilized for beginning a version upgrade process. The form standardizes what information is provided to the headquarters upgrade team by the country offices who commonly work with a specific customer. The form also ensures that no necessary information is forgotten to be provided. The highly standardized nature of the form and Jira tickets have proven to be an excellent tool in reducing the risks associated with cultural differences between country offices. These risks include perception of the level of importance of the technical tasks, order of the tasks, and scheduling.

> *I feel that, at the moment, [the amount] of communication is good enough, because we basically cover every aspect, we have communication before the migration, during the migration, and after the migration. We have all of the communication information flow pipeline already built.*
> Interviewee 1

> *Migration tasks, I think they have done a tremendous job in documenting this thing. It is a crucial part of the communication which is being delivered to us. When I started, in just 2-3 months' time I was put on this task. So, I think those things are pretty well documented, what all needs to be done: pre migration tasks, during migration tasks, post migration tasks. Yeah, [in] Jira tickets and the wiki pages.*
> Interviewee 2

However, communication has not always been as fluent as it is today. Before hiring specific people for handling organization, communication, scheduling, and resource planning of version upgrades and technical architecture migrations, these were handled by a single person. Soon, it became apparent that this amount of responsibility on a single person, on top of their other duties, was not sustainable. Interviewee 3 found that the introduction of new people specifically for this role is seen in the country offices as a great addition, which improves the fluency of the upgrade processes significantly.

When [a single person] was trying to do it almost by [themselves], I don't know how [they] kept up with it. I think that now there are enough people to help. Somebody is doing scheduling, resource assignment, someone's doing all that now. I think that things are much better now, just because it's very organized, whereas it didn't seem like it was when I first started.
Interviewee 3

Fluency in organization, communication, scheduling, and human resource planning in the version upgrade and migration processes have been achieved by continuously fine-tuning Jira tickets to include all the information that the technical experts and project managers in the country office might need. In the interviews, it was considered important within the process that all necessary information be in one place that is straightforward to find. Jira tickets fill this requirement by possessing the feature to assign tickets to individuals, enabling each person who needs to receive a certain piece of information to receive it reliably. Additionally, the ticket system aids in resource management: by assigning tickets to specific individuals, the division of responsibilities and individual schedules among employees becomes unambiguous. The continuous fine-tuning of the ticket system is achieved by constantly gathering feedback from the country office that was at the receiving end of the instructions. Interviewee 7 specifically emphasized that the assuming clarity of the tasks detailed in a ticket may be misguided, thus increasing the relevancy of stakeholder feedback and further fine-tuning. According to them, it is commonplace to underestimate the level of clarity and unambiguity that is required in a set of instructions. They felt that this aspect of communication between headquarters and country offices should be improved further, and to especially take new and inexperienced employees into account.

My idea is that even a stupid person like me, if he knows how to read, he should be able to do everything by reading a procedure, which means that there must be a procedure for everything. If I have to buy toilet paper, I need a procedure to do that.
Interviewee 7

While the documentation and pre-written instructions are generally deemed to be adequate and serving the purpose by some countries, others wish for even more transparency. A few interviewees felt that there are not enough clear instructions given to the country offices about every step of the migration process. The instructions should be unambiguous, and even the simplest of steps should be spelled out with the assumption that the person reading the instructions has no prior knowledge of the migration process. The instructions should contain separate sections for each type of stakeholder, including the end customer. Although opinions on this issue had some variation between interviewees, nobody expressed a wish for fewer details in the instructions. Thus, increasing the level of detail in instructions can be considered a relevant step towards mitigating risks caused by multiculturality in technical processes and improving the communication between headquarters and country offices.

> *I think [the amount of communication] is not enough. Migrations are one of the most difficult things that I've done here, not because they are difficult per se, but because they were a process that I didn't know, and I didn't have anybody describing the process to me. So, what I would have liked to see is a 30-minute [Confluence] page explaining how it works, what everyone is supposed to do. The customer never knows what to do during validation after migration, because there are so many more things to do compared to typical validation of our little minor development.*
> Interviewee 7

Management of time was among the most frequent topics of discussion in the interviews, especially the topics of planning projects early enough, and challenges posed by time zone differences between the customer-facing teams and the central teams. Among other things, a migration and a version upgrade require allocation of employee resources, agreement on service breaks, and time for performing technical changes to the customer environments. Such a complex process must be started well enough in advance to succeed. Interviewee 4 expressed a concrete wish of informing necessary stakeholders of such a significant process immediately when the intention to perform the process is confirmed, instead of informing each stakeholder individually closer to the time that their contribution will be needed. In the case of an architecture migration, this may mean an entire year in advance of the process, which would then require reminders later along the process. This would allow for more flexibility and margin for error in complex technical changes that need to be performed before the architecture migration, like server migrations and implementation of cloud technology.

To complement the suggestion, several interviewees also emphasized the importance of performing tasks according to the agreed-upon schedule. The architecture migrations and version upgrades involve numerous steps which cannot be performed before a single or multiple previous steps have been performed by another employee. This can cause stoppages in the advancement of the process, delays in the schedule of the entire project, and even emotional friction between single employees or teams. However, often the reason behind a delay is an excessive workload or lack of knowledge or understanding of the specifics and importance of the task. It is crucial that the party that assigns a task to another party ensures that the consequences of not following the plan are understood by all parties. Other reasons may include unclear employee resource allocation such as unclarity with which technical expert is supposed to perform a particular task. Another common reason is that someone has forgotten the schedule of their own specific responsibilities. In a great majority of cases, problems like these can be prevented by simple communication and predictive reminders based on experience of common problematic phases of the process. Additionally, these common problematic phases should be addressed and developed to potentially remove these problems.

> *This is a part I feel we need to improve the most. We check their pre-tasks two weeks before the migration, it's supposed to be a deadline for them to finish their migration pre-tasks. But we find it is never the case, we always have something lacking there. So, these two weeks become very essential for us to check and find out what is missing and then to chase them to be done on time. Sometimes the problem is with the very unclear [employee resource] assignment. Because some of the tasks are done by a Technical Consultant, but we don't know who the TC is.*
> Interviewee 1

The introduction of new communication tools like Slack and Jira has improved transparency during technical troubleshooting. Previously, technical troubleshooting happened without the technical conversations being visible to the people organizing the troubleshooting, described playfully by Interviewee 3 as “the man behind the curtain in ‘The Wizard of Oz’”. Currently, all conversations are visible to everyone on Slack and Jira, unless they are being conducted via private channels like email or private messages on Slack. Despite not being expected to understand every technical detail that is being discussed, the interviewees regardless found it valuable to be able to follow the overall progress of the troubleshooting. Utilizing private channels to communicate matters that should be visible to everyone is an indication of prioritizing convenience over overall transparency. Private channels tend to be utilized to avoid clutter in the public channels when a matter is perceived to be irrelevant to others. However, although this might be true at first, the private conversation may quickly evolve into something that would be relevant to others and often is not carried over to the public channels.

Overall, the interviews clearly showed that the usage of communication tools is currently at a satisfactory level. Setting clear guidelines on the purpose of each communication tool was considered to have been done well. However, despite the overall satisfaction, a single exception was brought up by every interviewee: the mix of usage between Slack and Microsoft Teams. Currently, an overlap between the two exists, where certain customer-specific internal discussion channels exist on Slack, and others exist on Teams. The main argument for Teams was collaboration with other partner companies outside of the company, who do not have access to the company Slack channels. However, this was not considered an insurmountable obstacle, should Slack be defined as the only acceptable tool for this purpose. Although no consensus was reached over which tool is preferred overall, all interviewees agreed that choosing only one or the other for all customer-specific channels would be preferrable. Regardless, despite some information being difficult to locate, the interviewees praised the fact that important information seldom seems to be entirely absent.

Interviewees expressed a wish for a clear definition of discussion tool preference to arise from their superiors, from the senior management of the company. They found that the senior management of the company should enforce standard “best practices” more when it comes to methods of communication. Currently, the mix of some customer-specific channels existing on Microsoft Teams and some existing on Slack leads to some conversations happening outside of the common channels. This, in turn, can lead to people missing important information. The approach should be unified so that all teams are using the same tools for the same purpose. This could also include completely discarding some of the communication channels, to focus the communication on a few specific ones. Requests were made for recurrent training on the usage of these tools, not only on how to utilize each tool, but also what to utilize each tool for.

Communication is very good and if you need information, you'll always find a way to get it. And more than that, you'll always find somebody who will help you. So, it is not impossible to find any kind of information, but sometimes it is difficult to know who can answer a question, who has that information.
Interviewee 7

I like standards, and I would like to have something in place where we all at the company, independent of which region we came from, that we follow the same rules, we have the same framework. This is something that I would like to hear more also from senior management, where we should go. We had the introduction of Slack, it was a decision, finally. I was not familiar with Slack before it, so if I could choose, I would have chosen Teams as the global communication tool. But OK, the decision was Slack. So now we all need to use Slack for communication within the [project] teams.
Interviewee 4

Organizing and planning of version upgrades and migrations for an entire cluster of country offices in a larger geographical area – for example Central Europe, or the United States – is led by a single lead organizer, who first gathers information from their respective area, and is then in contact with the Finnish headquarters team that executes the upgrades or migrations. Interviewees from the Finnish headquarters considered this an effective way to utilize planning resources, and to improve overall efficiency. However, at times, due to the size of the region and due to the high number of customers in a project phase in that region, information may become difficult to monitor. A solution was suggested by Interviewee 1, where larger and busier regions would be split in two, and a separate lead organizer would be assigned to each half of the region.

A problem is for some of the regions that they're getting too big. The information flow we get is not quite as complete because it's very hard to keep track of all the information in that region, when they're too big. It's impossible to get all the information in one go, in one meeting.
Interviewee 1

The most important aspect of time management in a technologically and organizationally intensive global project that was brought up by the interviewees is the effect of time zones on all functions of the process. Problems caused by time zones can be divided into two major topics: availability of expertise at any given time, and availability of support for the customer.

Problems with time zones in relation to availability of expertise are fundamentally a problem with the internal structure and employee resource allocation of the company. The primary purpose of country offices for the company is to provide support and organize projects for customers located in their region. Consequently, team that are not directly in contact with customers, that is, teams that provide expertise with specific parts of internal systems, such as software development, identity access management, or – especially relevant for this thesis – version upgrades and migrations, are mostly located in the Finland headquarters. Thus, according to interviewee 2, teams which are located on more remote time zones like North America or Australia, struggle to receive internal support in a reasonable amount of time. Lately, the central teams have begun to obtain new members in the other regions to alleviate this problem with time zones, and it is considered a positive development of the situation. However, according to the interviewees, this development has not yet progressed far enough. The interviewees in country offices called this the "Follow the Sun" principle and expressed a strong desire for further implementation of it.

> *But there could be things where I've just done an ad hoc task and I want some help from identity access management. And as we know, that team, they're mainly based in Finland, so the time zones don't match for us. Then at that time I could be facing some issue. That is why we're trying to hire more resources across the globe. So, one good thing would be continuous hiring or allocations to teams in every market, or at least every separate time zone area, like the US, Asia-Pacific, and Europe.*
> Interviewee 2

> *If we are going to have a lot of customers in the US, it would be more useful to get technical people in the US than in Finland, for example. So that people in the US can work on Finnish customers during the night and vice versa.*
> Interviewee 7

In addition to time zones causing a problem of unavailability of resources for internal projects, customers of the company are also affected by the same issue. Interviewee 4 explains that often customers have specific times of the day when they are operating their own environments more actively than other times. It is common for these times to be placed at the beginning or end of the working hours. Due to the increased use, any potential problems are more likely to be noticed during these hours. Consequently, even small differences in time zones can lead to problems, if the Finnish headquarters have ended their working day one or two hours prior. Although employees in the customer' region's country office are still working at that time, they may not be able to provide enough help due to the employees with more specific expertise having already ended their day at the headquarters. This problem is amplified if the contract of a customer promises availability of support beyond the service hours of the country office. Naturally, national holidays of a single country also lead to similar problems, especially if offices in other countries are not aware of them.

> *For our customers, the first part of the day is busier, and the last one, and then they raise their problems. And at the end of the day, the Finnish people go on leave. It's of course normal, but we have the issue, and the customer is still online, and they expect us to help them. It is terrible also if you want to get good support during the summer, when all Finns are on vacation, although it has improved this year.*
> Interviewee 4

Interviewees expressed satisfaction towards company-wide weekly presentations of current company-related topics, so-called "Posse calls". The calls are considered excellent for keeping employees of all levels informed of the current strategy and future of the company. According to Interviewee 7, this is a method "directly from a business school textbook" and gives employees of all levels a higher sense of purpose. It lets everybody know what is the big picture of the company that they are working towards.

> *The call we have every week, where they talk about the strategy of the company, is an absolutely excellent thing that you will not find in many other companies. This is a very positive way to communicate with the workers where the company is going, and to make everybody feel part of something good. In many companies, they keep the information hidden. So, if you work*

on a low level, you don't know why you are doing something. You don't have a real reason to wake up in the morning.
Interviewee 7

4.3.2 Differences and similarities between the country offices in terms of communication

Different foreign offices differ greatly in maturity compared to each other. The company was founded in 2005, and the first foreign office expansion happened several years later. Since then, new offices have been established periodically over the years. Consequently, the country offices have significant differences in maturity and established working culture. Naturally, this also affects the number of customers in a region that have participated in a version upgrade, or especially a migration of technical architecture, as some have only become customers after the new architecture was taken into use.

A major contributor to differences between country offices in communication with the Finnish headquarters is differences in workload. This is caused by a lack of human resources, according to interviewee 1. They elaborate that due to having too many projects assigned per employee, tasks related to a version upgrade may easily be deprioritized and consequently forgotten. However, these delays or failures to perform version upgrade related tasks are not a problem only in one location. Instead, workloads of country offices shift over time, and an office that was previously considered to lack the necessary employee resources to perform their tasks on time, may gradually become reliable and quick, and vice versa. Ultimately, the interviewees from the Finnish headquarters expressed a wish that country offices would more readily communicate to them the fact that they are struggling to meet deadlines due to excessive workload. They expressed frustration over situations where this type of communication has not happened, because that can seem like a sign of disinterest.

It can make people feel very frustrated. You expect some answers from them and they're just not replying to you, it gives you a sense that they're not actually working on this, that they just don't care. But the true situation usually it's not like that. They probably have way too many tasks piled up. So, they don't have time to reply to you. But I feel in this case the best way to solve it is even though they cannot jump into this situation right now, it's better if they still reply something. For example, 'Hey,

I will come back to you later.' This would make everyone feel much better.
Interviewee 1

Country offices have differences in the preferred ways of common daily communication, according to the interviewees from the Finnish headquarters. They described some offices as preferring to set up meetings on Microsoft Teams to agree also on more minor subjects. Some offices they described as preferring to utilize text-based communication in every situation possible. Some offices prefer to work internally within their office to first come to a decision and only then broadcast their decision to the Finnish team that they are collaborating with.

A lot of people in [country] tend to just want to do everything by text. Pinging people in Slack, or by Jira, avoiding Teams calls for example, unless it's clearly the best way to do it.
Interviewee 6

Individual customers have a direct effect also on the communication between the country office and the HQ in Finland. For example, according to interviewee 5, customers in the USA tend to display a significantly different working culture in comparison to other parts of the world. They can often be demanding in terms of schedule and volume of work, which can reflect onto the communication between the US office and the Finnish headquarters. In such situations, the US office is typically pressured by the customer to request a quicker than expected schedule from the Finnish teams. Customers all around the world have differing ways of communicating, resulting in additional and different methods also within the company. For example, despite utilizing the standard Jira ticket system that is visible both to the customer and the company, a customer may also want to confirm any changes by calling on the phone.

From my experience, US teams have a different way of communicating, maybe it is because they have very big demanding customers, and the customers are pushing on the customer team, and the customer team is pushing on you. You're always really under pressure. For me, I got the impression that this is a way of working, always 'Hurry up!', the customer is pushing on the customer team to finish the migration very, very quickly.
Interviewee 5

A major factor that is causing differences between country offices in the ability to communicate efficiently are time zones. Naturally, no employee is required to work outside of their working hours, which leads to differing expectations regarding response time. Interviewee 6 describes the expected response time for country offices in Europe as between one and two hours. This way, suddenly emerging problems may be solvable before the scheduled service break, which eliminates the need for postponing said service break. Conversely, the offices in the Asia/Pacific region do not share any working hours with the Finnish office. Instead, they must leave a message which will then be answered by the following morning. Naturally, this causes conversations to last for weeks, which must be considered when creating plans and schedules. In urgent situations, they can contact the 24/7 Support team in Finland, but the 24/7 Support team's knowledge of customer-specific solutions may not be as thorough.

> *I'm discussing pretty often with Australia, so it's always like a day until I get an answer. So, one conversation takes a week. So that's something you always need to think about, like "where is this person located?" You can't assume everyone's gonna answer within a few hours.*
> Interviewee 6

4.3.3 Causes of unreliability in communication

When inquiring about potential ways of improving the current ways of communication, the most common problem that could be found was the difficulty in keeping the relevant people updated with the information that they are likely to need. More specifically, the following four problems were identified: not keeping checklists and comments on Jira tickets up to date, utilizing private 1-on-1 channels like email or private Slack conversations for troubleshooting, not creating specific Jira tickets for each significant problem, and not maintaining the customer-specific pages in the company's internal wiki. The effects of the lapses in communication were found to often be merely irritating in nature and causing some unnecessary workload, and an example case of significant loss of data was given by interviewee 2, which was caused by planning information not being visible to all necessary parties.

> *A refresh was planned for the test environment from production. But as the [outsider] partner was away and later on came back, he was like "Oh, did you do a refresh? Because all my data*

is now lost." So, I think that could be a [point of improvement] which we have actually identified.
Interviewee 2

A significant amount of technical troubleshooting is performed by consulting older entries in the internal wiki and Jira tickets. Commonly, a previous instance of the same problem can be found in those sources and by following the steps that were taken previously, the troubleshooting process can be sped up significantly. However, it is not uncommon for a Jira ticket to exist where tasks or the entire ticket are marked with the status "Done" with no explanation of how this status was achieved. Occasionally, these status markings may also not reflect the actual status of the investigation. In these situations, it is significantly less useful for the next person to inspect the ticket in search of troubleshooting instructions. In most cases, it is possible to see who the ticket is assigned to and message that person to ask for clarification. However, in some cases even this is not indicated. Instead, some tickets are being worked on with nobody being assigned to them, and with no clarifying comments in the comment section of the ticket, making it challenging to request clarification from anyone.

An important thing is to keep the [Jira] ticket up to date, commenting on that ticket, or if there are any problems with some tasks, then communicating on that ticket. It is very important to keep that communication all in one Slack thread or that one ticket. If it is in different places, then it just becomes a loop just to find it. If everything is under one place, then we can just follow it.
Interviewee 2

Emails and other ways of private communication of only two people or a small group were seen to pose a problem due to the troubleshooting conclusions not being visible to the next people who encounter the same problem. A consensus was found within the interviews, that if the troubleshooting involves any changes to a customer's working environment, the changes should be documented in a Jira ticket. This way, the solutions are visible to all employees who may need the information in the future, causing significant improvements in working efficiency. In addition to documentation of internal technical communication, Jira tickets were seen as a preferrable method also for documenting communication with the customer. Some customers have implemented their own systems that can be automated to function with the Jira systems of the company, enabling the gathering of customer communication information to Jira tickets, which are available to all employees within the company. Communication with a customer that has not implemented such automation should be summarized by hand into Jira tickets, interviewees 3 and 4 found.

> *We keep far too much in email, instead of in tickets. The email back-and-forth is great when you never have to get anyone else involved, but the minute you have knowledge that somebody else could use, if it's not in either a FAQ database or within a [Jira] ticket that somebody can go and look at and find that information, we kind of stymie ourselves. I think if it involves any change to an environment, it should all be in Jira. We can search for problems. We can look for trends. You can export data, slice and dice it in so many different ways.*
> Interviewee 3

There may be numerous reasons why manually creating Jira tickets that describe an emergent technical problem is being done less frequently than would be necessary. With interviewee 3, we identified some of the most common reasons to be the additional workload and shame if the employee was the cause of the problem. Problem tickets should include a detailed description of the problem, including error messages and steps that have already been taken. However, writing a long and detailed description of the problem can be burdensome, and may be viewed as wasting time that could be spent on solving the problem itself. Consequently, some problems do not feature a Jira ticket which could assist in solving similar problems in the future.

> *Sometimes people might be too lazy to create new [Jira tickets], or lazy, or then otherwise don't want to do it, like for example creating incident tickets. If you've caused an incident, you might be scared to create ticket for it.*
> Interviewee 3

4.3.4 Turning time differences into an advantage: Following the Sun

The topic which generated the most discussion and suggestions was the "Follow the Sun" model, which would allow service breaks to happen outside of business hours for a particular customer, including overnight repairs in case of problems with a customer's environments. Currently, customers in the Asia/Pacific region can schedule version upgrade related service breaks outside of their working hours due to most of the appropriate workforce being located in Finland and the USA. Similarly, the employees in Finland and the USA are able to perform upgrades outside of each other's working hours. However, the expansion of the team to the USA is a recent development that is not common throughout the company.

Following the Sun is not an entirely new idea within the company. According to Interviewee 3, it has been suggested before, with varying results. They explained that people generally understood that Following the Sun can be helpful to customers and employees overseas, but they struggled to see the effect and benefit to themselves. Naturally, Following the Sun would mean that not only would they be working more on overseas customers, but the teams overseas would also be working on their customers, each filling in the times when the other office is not working. This would reduce the amount of early morning troubleshooting that has piled up during the night.

> *I think people look at it sometimes and say, "Well that that's great for that office, but what does that do for the rest of the company?" The immediate thought isn't that they can work for me overnight. So, when a nightly run has a problem, there would be somebody awake that could go and look at it.*
> Interviewee 3

The necessity of local presence is an important aspect of Following the Sun to consider. Every customer needs availability of technical and organizational support during their working hours. Conversely, procedures which require downtime in the technical systems of the customer are considered sub-optimal due to decreased efficiency and service availability. This creates a need for increased collaboration between offices in different time zones, namely Europe, North America, and Asia/Pacific regions, to provide the correct kind of service during the correct hours of the day. For example, Employee 1 in the USA needs to be aware that Employee 2 in Finland has just performed a version upgrade to a customer, so that Employee 1 knows that they should be monitoring what happens with the customer environment during the

European evening and nighttime. Additionally, Employee 1 must possess an appropriate level of familiarity with the customer's environments despite not being the primary appointed Employee for the version upgrade.

> *The time zones may be a strength point for us if we consider that we can do some maintenance jobs when our customers leave [for the night], which is a great thing. And we may have more time to test the jobs when the customer leaves. So even if we have some problems, we can solve them during the night. And it is absolutely painless for the customer and even for us.*
> Interviewee 7

5 Summary

In this chapter I summarize the thesis in five sections. First, I evaluate the findings of the study through the lens of the two research questions. Second, I examine the commonalities and differences in findings between the literature review and the study. Additionally, I provide suggestions for further research. Third, I formulate practical suggestions for improving the technical processes that were the topic of the study. Fourth, I discuss the limitations of the study. Finally, I draw conclusions of the study.

5.1 Findings of the study

5.1.1 Country offices' opinion

This subchapter describes the findings of the first research question, "How do offices in other countries perceive the communication and its functionality between them and the HQ in Finland?"

Overall, interviewees in the country offices were pleased with the current state of communication in technical processes between them and the headquarters in Finland, specifically the team responsible for technical architecture migrations of customer environments. The interviewees were pleased with the increase and development of employee resources in communication and organization in the headquarters migration team, as this significantly improved the fluency of the planning stage of those technical processes. Best practices for utilizing each communication tool were considered by some to be set up well, others found the instructions from senior management of the company to be somewhat lackluster. Finally, weekly company-wide presentations of current affairs were praised by country offices.

Small areas of improvement were found. Sufficiently high level of detail and clarity in instructions of technical processes that are to be performed the country offices was found to be a point of concern. Interviewees from both the country offices and the headquarters emphasized the importance of working according to the agreed-upon schedule to avoid technical steps being blocked by the incompleteness of previous steps. Communicating the schedule itself to all necessary stakeholders as soon as possible was also found by country offices to be important.

Due to the temporary nature of the technical project teams that are formed for the completion of the technical architecture migrations, the importance of clear allocation of responsibilities is increased. Additionally, it must be clear to each member of the temporary team what the impact of their part of the process is, as well as the impact of failing to complete their part according to the schedule.

Time zones were a major talking point. Availability of the expertise of specific internal teams being largely tied to the Finnish working hours was considered a major problem by those working in distant time zones like Australia and the USA due to the difficulty with communicating quickly with those teams. This also affects the availability of support for customers in those time zones in case the necessary procedures require specialized expertise from those internal teams.

5.1.2 Differences and similarities between the country offices

This subchapter describes the findings of the second research question, "What are the main differences and similarities between the country offices in terms of communication?"

The country offices differ in maturity. Some are several years older than others, leading to significant differences in the level of established working culture. The number of years that a country office has been operating can influence the number of customers that the company has acquired in that region. This in turn influences the level of workload that the country office is facing. If the amount of available workforce in that office does not grow accordingly, it can lead to the office struggling more than other offices to meet deadlines, causing differences in communication, availability, and reliability.

Local culture plays a significant part in forming communication preferences. Some offices prefer to set up video calls for all discussions, whereas some utilize text-based channels for as much as possible. Most offices land somewhere in between these two extremes, but it is nevertheless a significant factor in determining differences between country offices.

Customers can directly impact the way a country office is forced to communicate with the headquarters by expecting faster than normal project completion times and support response times. This kind of time and workload pressure is especially typical in the cross-industry working culture of the USA.

Time zones significantly limit the type of communication that can be had with offices on other continents. With the headquarters being located in Europe, the standard expected message response delay of other European offices is between one to two hours, whereas offices in Australia for example are limited to a single message per day. This leads to complete inability to perform any corrections to schedules on a notice of less than a day.

5.2 Contributions

5.2.1 Parallels between literature and study

Chapter 2 “Literature review” of this thesis focuses heavily on multiple aspects of multicultural teams, that is, teams that consist of people of several nationalities, cultures, and often also geographical locations. However, a common theme among this literature is that the teams in question are either permanent or long-standing, or they plan to be that. The multicultural teams being investigated in this study are temporary in nature, with a new team being assembled separately for each technical architecture migration. The literature was chosen for this thesis despite the mismatch, because more fitting literature seemingly was not available.

Establishing those temporary multicultural teams does still follow many of the steps mentioned in the literature, and benefits directly from it. For example, Earley & Mosakowski (2000) mentioned important aspects of multicultural team creation, like establishing a set of common rules and expectations, effective communication, and cross-cultural empathy. For the kind of team creation featured in this study, these aspects must be defined by higher management in the company headquarters to be effective. These definitions were an aspect of communication between country offices and headquarters that this study aimed to examine. The result was great overall satisfaction of the guidelines.

Literature about virtual teams and virtual communication proved to be more directly linked to the premise of the study. Sosa et al. (2002) provided insight into the communication preferences of country offices by suggesting that employees with a stronger grasp of the operating language of the project tend to be less averse to utilizing real-time virtual communication methods, such as phone calls and video calls, whereas those who feel less confident in their language ability tend to prefer written communication that gives them more time to ensure the clarity of their message.

Ochieng & Price (2009) highlighted the importance of a project environment that facilitates co-operative team culture. They suggested that open communication and constructive feedback processes are a crucial part of that culture, and that an effective way to achieve that culture are weekly meetings that keep each team member informed of the project status. This was found in the study to already be a common practice in the communication between country offices and headquarters, and the practice mostly received praise from all parties. The most significant problem was identified to be the excessive size of some country offices, causing an inability to transfer the necessary amount of knowledge quickly enough.

Utilizing time zone differences between country offices for the benefit of schedule planning was a common suggestion brought up by the interviewees. They named it "Following the Sun". A similar model was suggested by St Amant, K. (2002), who described a working routine where an employee would constantly pass their work over to the employees in the next time zone, who would then continue from where the previous person left off. In practice, implementing the model exactly as St Amant, K. (2002) suggests is not practical in this particular company's case. However, some type of implementation of this model is universally seen as a beneficial future step.

5.2.2 Suggestions for future research

As I mentioned earlier, literature regarding the effects of multiculturality and headquarters-determined guidelines on project team formation and function is sparse regarding temporary, project-specific teams. Are there differences in what aspects must be considered to achieve a successful temporary team versus a more permanent one, or are the same methods similarly effective in both situations?

More research should also be conducted about the relationships and cultural intricacies between country offices and headquarters, especially now considering the rapid increase of remote working opportunities caused by the aftermath of the COVID-19 pandemic.

Lastly, more research should be done on ways to create a working environment that enables all preferred ways of working to thrive, instead of determining a single way of working based on assumptions, which is then enforced. Not only is it beneficial to accommodate cultural preferences of different country offices, but it would also benefit those who prefer or need different ways of working due to physical or mental disabilities or disorders.

5.3 Practical implications

There are two kinds of suggestions that can be provided to the company featured in the single-case study of this thesis. First, I highlight aspects and features of the current communication and collaboration style that should continue to be handled in a similar manner to the way they have been handled until now. Second, I gather concrete suggestions for improving some aspects of the processes from the study. The interviews did not produce any aspects of communication or collaboration in the studied company that would be actively harmful to the operations, or the people involved. Therefore, I do not find it necessary to make suggestions to outright remove any aspect of the processes.

5.3.1 What to keep

Based on the study, the basis of communication and collaboration in technical processes is strong. The system of Slack conversations, calendar events, Jira tickets, and standardized service request forms works well and keeps employees happy. With Jira tickets specifically, clear checklists with clearly assigned responsibilities complemented by clear instructions in the "internal wiki" help remove a significant majority of uncertainties and ambiguity in the processes. Maintaining and further improving the level of clarity in the checklists and instructions requires a continuous investment of time and effort. However, in the long run it reduces the time wasted on troubleshooting problems that others have already found a solution for, turning a great net positive in time investment.

Creating a sense of purpose in employees is a crucial step in ensuring employee happiness. Providing an overall picture of the current situation and news regarding the company to all employees in the form of weekly "Posse calls" showcases to employees of all seniority levels what they are working towards and what their work has accomplished.

Weekly calls for updating information are also received well in the form of migration and version upgrade status updates and planning. Having a weekly conversation with the country offices of each geographical region is seen as an effective way to ensure the transfer of important knowledge to necessary stakeholders.

5.3.2 What to improve

While having detailed instructions in Jira tickets checklists and in the "internal wiki" is seen as a good thing, it is crucial to ensure that these instructions are up to date and clear enough. At times, there have been uncertainties about who is responsible for a task, as well as unclear steps in checklists. In the internal wiki, it is vital to provide detailed instructions for performing a task, instead of only describing the problem. Fortunately, these are known issues that are already actively being worked on.

On the "internal wiki", specific detailed packages of information and instructions should be created for each possible stakeholder in a technical process. For example, in a technical architecture migration or a version upgrade, these instructions would feature a separate section of everything a country office project manager needs to know. Technical experts and even the customer would each be provided with their own separate section of instructions and information.

Wider implementation of "Following the Sun". Utilizing the time zone differences of Europe, the Americas, and South-East Asia and Australia to a fuller effect would not only create fluency internally within the company processes, but also improve quality and speed of service from a customer point of view. For example, a European employee upgrades a customer environment, and the following night after crucial calculation runs, teammates from Australia would be able to validate that the runs were successful, and act sooner in case of problems.

Utilizing both Microsoft Teams and Slack for customer-specific channels is considered confusing. The interviewees wished for clear directions from upper management on choosing the appropriate tool. They were unable to agree on which tool they prefer, but all agreed that regardless of the choice, concentrating all customer-specific channels to either one of the tools would be preferred. Additionally, clearer instructions for other communication tools as well were requested from upper management for what to utilize each communication tool for.

Restraint in utilizing private communication methods for general information. Employees should pay closer attention to the methods of communication when they are discussing project matters with another employee. Keeping generally important information like new plans or status updates in private conversation channels like private messages on Slack or in email threads prevents other employees from obtaining the information. It is not always clear which information is useful to all people involved, but it is more common and counterproductive to forget to share information than to share too much of it.

Weekly status update calls with geographical regions are generally seen as a good thing. However, as some regions grow, it becomes increasingly difficult to find enough time to process all the necessary information. This could be alleviated by splitting some of the regions into smaller regions based on the number of customers and organizing separate meetings with each.

The growth of some regions can also be seen as increased workload for those working with the customers of those areas. This has previously led to delays in performing tasks that the headquarters teams have assigned to them. Another reason is lack of proper communication to ensure that the country offices are aware of the level of importance of performing the tasks on time. Additionally, communicating the reason for the delay instead of being unresponsive is equally important because it enables the other teams to make adjustments to possibly alleviate some of the problems.

5.4 Limitations

The country offices outside of Finland are of varying sizes, which limited the potential candidate pool for the interviews in some smaller locations. This restriction led to a reduction in the generalizability of the information gathered from the interviews, because the personal experiences of an interviewee may be more visible. To counteract this, I attempted to choose interviewees with experience of working with numerous customers and teams, so that their broader general knowledge would mitigate some of the shortcomings of a smaller sample size.

I am personally involved as a technical employee in the Finnish headquarters team in the same technical processes that these interviews concern, which may lead to bias due to my personal experience. Additionally, due to my role in the central team that organizes these technical architecture migrations, as well as a colleague in general, the interviewees may have preconceptions about the kind of information that they should or should not provide me with. However, I did not detect that the interviewees would have withheld significant information due to this. Overall, the interviewees did not seem hesitant to answer questions that I presented. The single exception to this was descriptions of specific stories of individual colleagues, where some interviewees did not wish to describe a problematic situation due to not wishing to speak badly of colleagues. However, these omissions did not affect the quality of the data gathered in a significant way. Some interviewees approved me of utilizing such data but requested information such as names of people or countries to be redacted from the thesis. They did not censor that information during the interview, indicating an environment of trust and honesty.

In some larger offices the number of customers and organizing staff is high enough that before reporting to the central team in the Finnish headquarters, they consolidate the information to a single leading organizer. Some of the interviewees were these leading organizers, who may have their own biases, which may not be as clearly present if all subordinates were interviewed instead.

Several methods were utilized to improve the credibility and trustworthiness of this thesis. During the writing process, the supervisor and advisors of the thesis regularly reviewed the content and provided suggestions for improvement, reducing my bias as an individual researcher. The steps and methods of data collection and analysis are clearly explained, and direct quotations of interviewees are provided for further justification of my analysis. Possible limitations of the thesis are explained in a comprehensive manner, strengthening the trustworthiness of the thesis.

5.5 Conclusions

This thesis studied and provides value in better understanding the relationship between the headquarters and country offices of a multinational corporation. Additionally, it studied how well the current arrangement of working practices suits country offices that each feature their own working cultures, as well as how these cultures differ from each other. The study showed overall satisfaction in practices including detailed written instructions, clear allocation of responsibilities, frequent communication and knowledge-sharing with other offices, and utilizing transparent methods of communication. The study showed dissatisfaction in the occasional failure to implement the practices mentioned above, as well as the failure to properly take advantage of having employees across a multitude of time zones. In addition to implementing and maintaining the above-mentioned practices, more transparent communication methods and more active archiving of problem descriptions and solutions can be recommended based on this study.

Based on the results, it can be concluded that the most important aspect of a multicultural working culture that can thrive is setting guidelines, expectations, and instructions that are as clear and unambiguous as possible. This greatly reduces the risk of miscommunication, misunderstanding, inefficiency, and conflict in multicultural corporate communication. This result confirms the words of Earley & Mosakowski (2000) about important aspects of multicultural team creations.

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Appendix A – Interview Structure

Pre-flight checks (10 min)

- How are you doing?
- The interview will take about 1h. The interviews are for my Master's Thesis and will be used to gather information about the communication practices regarding technical processes, we will use the [technical architecture migrations] as an example of this
- The basis for the communication has been established by the HQ in Finland according to what they think is the best way to do it. The purpose of the thesis is to see what offices around the world think about the way things are done currently, and how to improve it.
- You will be anonymous in the thesis.
- I'm not here to evaluate your performance in any way, I will only use the information to build a picture of the current situation and provide suggestions to the people in Finland to accommodate the people in other countries better, so suggestions for improvement are very much welcome.
- Participation in the interviews is completely voluntary, and you can stop the interview at any time, you may even retract your statements after the interview.
- Is it ok to record the interview? The recordings will not be published anywhere, they will only be used for easier notetaking on my part.

Role and experience (5 min)

- How long have you worked at the company? Have you changed roles during that time?
- Describe what a day at work looks like for you.
- How do you feel about your work? (Adjectives)

Migration process (5 min)

- How many different customers are you working on?
- How many migrations have you been a part of?
- Describe what a migration process looks like in your end (How does it start? What works, what doesn't?)

Communication (20 min)

- How has communication been done during migrations? (What tools were used? How active was the communication?)
- How do you feel that the communication has been working between your country office and the Finland office during migrations? (What goes well? What doesn't? Why?)
  - What factors do you think affect that? (Assumptions, culture, etc)

- How much and what kind of communication would be ideal? (What tools? How active? What things are important? What are not?)
    - How could we reach that ideal situation? (Concrete examples of ways of working and ways of thinking)

Fixing the situation (10 min) (possibly skip this section if running low on time)

- Has there previously been an initiative to see how well the communications to Finland are working and/or to improve them?
- When we introduce improvements to communications, how could we measure that it had the desired effect?

Story time (5-10 min) (possibly skip this section if running low on time)

- Can you tell a story of when a migration has had a big problem and how do you feel that it was handled in terms of communication?

Thanks (1-5 min)

- Do you have anything that you'd like to add?
- Thank you for your time!
- I'll inform you of the results of the thesis and what steps we will take to improve.