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Reducing non–value–added time in virtual meetings

A case study at Lynk & Co

Rasmus Arvidson
Albin Genberg

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Luleå University of Technology
Department of Social Sciences, Technology and Arts

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Preface

This report is the master thesis of our education in Industrial Engineering and Management at Luleå University of Technology. The master thesis is within the area of quality technology and management and was conducted as a case study at Lynk & Co during the spring of 2022.

At Lynk & Co every employee has the opportunity to work remotely, this combined with the ongoing COVID-19 pandemic resulted in the master thesis project being conducted virtually. Another aspect which also led us to perform this study virtually was the subject of the study itself. We thought that working virtually would expose us to the difficulties in being time efficient in virtual meetings, and therefore result in a deeper understanding of the problem Lynk & Co faces, which it did. However, this came with some setbacks since we did not have the chance to meet and interact with all Lynk & Co employees during the course of the master thesis project.

This master thesis has given us deep insights into the challenges that virtual meetings and remote work bring upon a rapidly growing startup. The methodology of both gathering qualitative and quantitative survey data as well as analyzing quantitative data with the help of multiple regression analysis, and lastly to methodically and critically analyze root causes to find potential solutions to the problems at hand.

On behalf of the two of us, we would like to thank all employees at Lynk & Co for their participation in the master thesis project by answering our survey, and giving us valuable feedback from the very beginning. Special thanks to our Lynk & Co supervisor Helen Lindskog for offering help with the master thesis project when needed. Another special thanks to our LTU supervisor Francesca Capaci for the vast amount of hours you have spent helping us and all the continuous improvements you have given us during the course of the master thesis project. Finally, we would like to thank all of our opponents, Erik Johansson, Martin Johansson, Isak Syri, and Pontus Åhman, for putting in the time and effort in reviewing our master thesis and giving us invaluable improvements, resulting in a better end product.

Abstract

The Covid-19 pandemic resulted in organizations rapidly shifting from physical- to virtual meetings to keep their business going. However, with this came challenges and efficiency problems that organizations were not aware of. This master thesis focuses on identifying and finding potential solutions to reduce non-value-added time in virtual meetings. This was accomplished by studying Lynk & Co, a rapidly growing startup. Data was collected via a company-wide survey. The data was quantitatively analyzed using both univariate, bivariate, and multivariate methods as well as qualitatively analyzed using a thematic analysis approach. The quantitative results showed that 35,2% of the total *Hours in meetings per day* are hours wasted, this translates to 16% wasted hours per 8 hour work day. Additionally, the quantitative results showed that five independent variables affect the *Wasted hours in virtual meetings per day*. These were *Hours in meetings per day*, *Key persons not attending the meeting*, *The meeting could have been replaced with an email*, *Focusing on the meeting (I.e., not multitasking)*, and *Being active in the discussions during the meeting*. The qualitative results showed that the majority of the respondents highlighted either the same or similar problems and solutions regarding the virtual meeting inefficiencies. These were lack of agendas and insufficient meeting follow-ups. This concludes that the major root cause of the wasted time in virtual meetings was found to be inadequate meeting information combined with inadequate information regarding the work responsibilities of the employees. This resulted in two main recommendations for reducing non-value-added time in virtual meetings in a rapidly growing startup. These are (1) developing an internal meeting policy and (2) incorporating more detailed employee information in the virtual meeting communication software.

Keywords: *Virtual meetings, Non-value-added time, Waste, Rapidly growing startup*.

Sammanfattning

Covid-19 pandemin har resulterat i att organisationer har varit tvungna att börja använda virtuella möten istället för fysiska möten. Detta har inneburit utmaningar och effektivitetsproblem som inte tidigare varit kända. Det här examensarbetet ämnar att hitta potentiella förbättringar för att reducera icke-effektiv tid i virtuella möten. Detta åstadkoms genom att undersöka Lynk & Co, ett snabbväxande startup. Både kvantitativ- och kvalitativ data samlades in genom en enkät som skickades ut till de anställda på Lynk & Co. Vid den kvantitativa analysen användes både univariata-, bivariata- och multivariata- metoder och vid den kvalitativa analysen användes en tematisk analys. Resultatet av den kvantitativa analysen visade på att 35,2% av totala tiden i möten per dag är slösad tid, vilket representerar 16% slösad tid per 8 timmars arbetsdag. Vidare visade resultatet av den kvantitativa analysen på att det var fem variabler som påverkade slösad tid i virtuella möten per dag. Dessa var *mötestimmar per dag, nyckelpersoner dök ej upp till mötet, mötet kunde ha blivit utbytt mot ett mail,* f*okus under mötet (I.e., inte multitaska)* , och *vara aktiv i diskussionerna under mötet*. Resultatet av den kvalitativa analysen visade på att majoriteten av respondenterna var enade i de problem som påverkar tidsslöseri i virtuella möten. Dessa var brist på agendor och att virtuella möten hade otillräckliga uppföljningar. Slutsatsen blev därefter att den huvudsakliga rotorsaken av slösad tid i virtuella möten är brist på mötesinformation kombinerat med en brist av information gällande de anställdas arbetsansvar. Detta resulterade i två rekommendationer för att reducera slösad tid i virtuella möten i ett snabbt växande startup. Dessa är (1) skapa en intern mötespolicy och (2) inkorporera mer detaljerad information gällande de anställdas arbetsansvar i det virtuella mötesprogrammet som används inom organisationen.

Nyckelord: *Virtuella möten, Icke-värdeskapande tid, Slöserier, Snabbt växande startup.*

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1. Introduction

This section starts by presenting the background and the problem description. After that the purpose and the main objectives of the master thesis is presented, followed by the delimitations of the master thesis.

1.1 Background

The Covid-19 pandemic has resulted in an exponential growth in digitalized solutions for organizations around the world (Savić, 2020; Soto-Acosta, 2020; Iivari et al., 2020). Many organizations have been forced to implement solutions that make it possible for their employees to work remotely to establish a safe working environment. This has included investments in e.g., cloud storage, computer hardware, and computer software for the employees to meet virtually (Soto-Acosta, 2020; Joseph et al., 2020). After two years of working from home, remote working has become a new normal for many people. There has also been an observed shift in organizational culture where organizations now accept, and sometimes even encourage their employees to work from home, either full- or part time (Howe et al., 2020; Parfentiev, 2020). According to Howe et al. (2020) this shift could be a product of many different variables where time savings, increased flexibility and cost savings in office space, office supplies, and office cleaning are a few of the mentioned benefits. Additionally, Galanti et al. (2021) have found that remote work can benefit employees' leadership skills and determination. However, working from home can both decrease productivity and work engagement as well as increase job stress (Galanti et al., 2021; Allen et al., 2015; Wang et al., 2021; Toscano & Zappalà, 2020).

According to Galanti et al. (2021), organizations should develop guidelines on how to manage their employees and how to observe that the employees are productive and engaged during remote work. This can be done by using interactive face-to-face software such as Zoom or Microsoft Teams during virtual meetings. When employees start to work remotely they have the perception that remote working is synonymous with having more meetings (Richter, 2020). This could be explained by virtual meetings being easier to set up (Richter, 2020). The perception that remote working is synonymous with having more meetings can also be found in remotely working technology startup companies (Yap, 2021). According to Yap (2021) remotely working technology startups must have a large amount of virtual meetings to further grow their business and establish themselves on the market. This is according to Picken (2017) mostly because of the startup's organizational communication channels, where the internal communication is often informal and unstructured to make rapid decisions regarding the plans and growth of the startup.

Research on virtual meetings and its organizational implications has increased during the Covid-19 pandemic (Kuhn, 2022; Galanti et al., 2021; Wang et al., 2021). However, the previous research provides limited insights into how virtual meetings affect startups. This

raises the question, how can startups manage their employees and at the same time measure their productivity and work engagement without distracting them with excessive virtual meetings? Or, would it be possible to identify sources of non-value-added time in virtual meetings? In an effort to generate recommendations that potentially can reduce non-value-added time in virtual meetings. As the world becomes more digitalized and more organizations are shifting towards remote work, this question becomes increasingly important to startups across the globe.

1.2. Problem Description

Lynk & Co is a five year old rapidly growing startup. They have a fully digital place of work, allowing all its employees to either work from home or in Lynk & Co's offices. However, having a fully digitalized place of work has implications when it comes to both work efficiency and work engagement (Galanti et al., 2021). Galanti et al., 2021 suggests that managers and leaders should use virtual meetings more frequently to follow up on the employees' work responsibilities and progress. Lynk & Co is experiencing excessive virtual meetings as a result. The employees' have expressed concerns about not being able to work productively. The employees have to be in meetings during the majority of their workday, where many meetings are of no- or little value to them since it does not give them information nor insights that assists them in executing their work responsibilities. Additionally, they have expressed concerns about the virtual meetings not being efficient. For example the meetings starting five minutes late, the topic of the meetings change, and no decisions being made (A, Genberg, personal communication, 20 January, 2022).

According to Yap (2021) startups often have a large number of meetings to further develop and grow their business. However, as the startup grows, gains momentum, and scale, the company should adapt and adopt a new meeting structure since the focus shifts from finding and solving a problem to carrying out activities to become a profitable company (Picken, 2017). This implies changing the informal and unstructured communication channels to a more formal and structured communication channel to become more effective (Picken, 2017). As Lynk & Co has grown, their way of conducting meetings has remained the same. This has resulted in them having too many meetings, that are inefficient, and that have more attendees than necessary.

1.3 Aim

The aim of this master thesis is therefore to investigate how meetings in a rapidly growing startup's fully virtual working environment can become more efficient and ensure that more time is spent on value-adding activities. Effectively answering: *How can a rapidly growing startup reduce non-value-added time in their virtual meetings?*

Where *"non-value-added time"* refers to the time spent in virtual meetings which does not result in the attendees acquiring information or insights which assists them in their work responsibilities. And where "*virtual meetings*" refers to a meeting that is partially or fully

distributed across time and space, meaning that any meeting that is reliant upon using technology mediated software for communication purposes is a virtual meeting, as suggested by Beise et al. (2003).

This will be done by examining the case of Lynk & Co - a rapidly growing startup. Executing the following objectives:

1. *Examination of virtual meetings at Lynk & Co, collecting and analyzing data through a company-wide survey to:*
   a. *Identify if non-value-added-time in the virtual meetings exists*
   b. *Identify where the non-value-added time exists (E.g., if potential differences between departments exists)*
   c. *Identify why the non-value-added time exists and identify potential solutions to minimize the non-value-added time*

2. *Give recommendations on how to reduce non-value-added time in Lynk & Co's virtual meetings*

1.4 Delimitations

This master thesis summarizes the results of a case study. The empirical data gathered will only be collected from Lynk & Co as the main aim of this master thesis is to help them identify and solve potential issues related to their virtual meetings. This master thesis will not analyze the results of implementing the identified recommendations at Lynk & Co. The implementation process and its potential impact will most likely stretch beyond the deadline of the master thesis. Additionally, the implementation of the potential recommendations may affect the organizational culture. When changes affect the organizational culture their impact can be fully understood in a long-term period (By, 2005; Burnes, 2015).

2. Company Profile

This section presents a brief overview of the case company - Lynk & Co. The sections start by providing background information regarding the organization's operations. This is followed by a brief description of the internal communication within Lynk & Co.

Lynk & Co is a five year old rapidly growing startup that sells and leases cars as well as provides a car sharing service. The company is owned by Geely Zhejiang Holding Group. During the summer of 2021 Lynk & Co launched their services in Sweden, The Netherlands, Germany, Spain, France, Belgium and Italy. Lynk & Co have since then scaled up their operations significantly. As a result of their rapid scaling Lynk & Co has grown from roughly 300 employees in June 2021 to roughly 1000 employees in January 2022. (J. Laine, personal communication, 20 January, 2022)

The internal communication at Lynk & Co can be described as virtual. There are offices at Lynk & Co but the interactions between departments, teams, and employees are almost always carried out through Microsoft Teams. The reason why Lynk & Co has taken this approach is because of the belief that everyone should be able to work from anywhere. This also results in Lynk & Co being able to bring in talents from around the world and creating employee diversity within its organization. Information is therefore almost always transferred virtually. The communication channels at Lynk & Co can best be described as informal and unstructured, where e.g., everyone can contact the chief technology officer by a message or a call on Microsoft Teams. This is according to Lynk & Co most likely because of their flat organizational structure (A, Genberg, personal communication, 20 January, 2022).

3. Theoretical Frame of Reference

This section reviews previous research related to the aim of the master thesis. The previous research reviews are startups, general meetings, physical meetings, virtual meetings and lastly identified challenges and problems regarding virtual meetings.

3.1 Startups

According to Marmer et al. (2011) the most widely used definition of the term *startup* comes from Steve Blan and Eric Ries, and are as follows:

"Startups are temporary organizations designed to scale into large companies. Early stage startups are designed to search for product/market fit under conditions of extreme uncertainty. Late stage startups are designed to search for a repeatable and scalable business model and then scale into large companies designed to execute under conditions of high certainty."

This definition does not highlight a need for high-technological solutions, no private funding, no maximum revenue stream nor a maximum number of employees, as many other definitions have specified (The Nordic Hub, 2021; Nurcahyo et al., 2018; Skala, 2019). As this definition is the most widely used, this master thesis will follow this definition onwards.

Picken (2017) has developed a life cycle model for a startup, highlighting four main stages that a startup proceeds through during its lifetime, these are *early startup*, *transition*, *scaling*, and *exit*, see Figure 1.
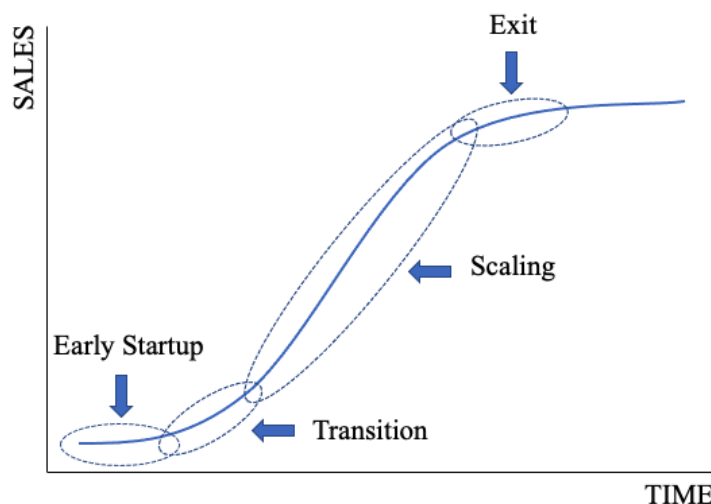

Figure 1: Life cycle model of a startup adapted from Picken (2017)

Picken (2017) suggests that every stage of this model is defined by their own set of challenges. The *early startup* phase has challenges such as defining and validating the overall business concept. This involves competitors, the startups offering, the target market, and the

proposed business model. Furthermore, in the *early startup* phase the organization often has an informal and unstructured communication process (Picken, 2017). The *transition* phase is when the organization gains traction, here the organization needs to work with structuring and formalizing the organization to prepare itself for the rapid scaling to come as more resources are added into the organization. Up until the *transition* phase, unstructured communication is effective (Picken, 2017). However, in the *scaling* phase the organizations usually require an increase in resources, resulting in increased complexity of the challenges within the organization and pressuring the unstructured communication processes (Hambrick & Crozier, 1985). According to Picken (2017) more formal and structured communication processes are necessary during the *scaling* phase as it helps the startup deal with increasingly complex challenges. Additionally, if formal and structured communication processes are not implemented in the organization it has been found to result in three main problems, (1) information getting lost or misinterpreted, (2) dysfunctional communication between departments, and (3) key problems within the organization remaining unsolved, leading to the organization struggling to reach the final phase - *Exit* (Picken, 2017).

These problems have been observed to lead to sub-optimization between departments in startup organizations, hindering knowledge management as departments work on the same project without each other's help (Picken, 2017). To mitigate these problems, Picken (2017) suggests that the startup must effectively communicate the vision, mission and strategy to maintain a clear sense of direction, develop and implement internal decision-making processes, have internal cross-functional meetings in the facilities, and nurture a culture that reflects the values, beliefs and norms of the organization. Oliva and Kotabe (2019) have further expanded on knowledge management in startups. They have found that knowledge management is best achieved with team meetings and brainstorming sessions. However, they also found that more internal meetings are a challenge for startups as startups often lack resources in the form of time, systems, and staff, making it difficult to effectively share knowledge within the organization. This is in accordance with Allen et al. (2015) who mentions that there is a fine line between internal meetings creating value and internal meetings hindering organizational effectiveness.

3.2 Meetings

The average employee spends around 10 hours per week in meetings, where a non-manager spends 6 hours per week in meetings and a manager spends 23 hours per week (Rogelberg et al., 2007). Rogelberg et al. (2007) state that the amount of resources spent in meetings tend to not be worth it. There are usually large inefficiencies in meetings where roughly half of the meetings conducted are rated as poorly executed by attendees (Rogelberg et al., 2007). The poorly executed meetings are not only a waste of time and resources, but they can also have a direct negative impact on the employees perception of their workplace, well-being, as well as their perception of their co-workers (Allen et al., 2007). On the contrary, well-conducted meetings are a forum for debate, discussion, idea generation and creative thinking (Allen et al., 2015). Additionally, well-conducted meetings tend to result in clear action plans and the next step for moving forward (Allen et al., 2015). Bagire et al. (2015) argue that a policy

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regarding meetings and clearly stated reasons for conducting the meeting before it takes place contributes to increased effectiveness. Similarly, Allen et al. (2012) claim that clear objectives regarding meetings are of importance as it helps employees to know if they should sacrifice their time to attend a meeting or not.

Allen et al. (2015) states that meetings within a company are critical and have the four main purposes as explained in Table 1. Unfortunately, meetings more often serve as a way to derail individual and organizational effectiveness without bringing positive results. (Allen et al., 2015)

Table 1: The four main meeting purposes (Allen et al., 2015)

Main meeting purposes	Description
Sharing of information	Information should be shared, but must not necessarily be reacted or acted on. The sharing of information is used to provide updates regarding what has happened and what they are working on.
Solving problems and making decisions	Attendees troubleshoot new or unusual issues and potential solutions to solve them.
Develop and implement organizational strategy	Leaders create and discuss strategies for the organization as well as how these should be implemented.
Debrief a team on performance	After an event or a milestone, the team should discuss and reflect on their expectations and actual results.

3.3 Physical meetings

Meetings conducted in a physical setting is the traditional way of conducting a meeting. Everyone is in the same room where real-time visual access enables the participants to both send and receive information from each other through body language (Lehmann, 2003). Physical meetings are more effective than virtual meetings when it comes to getting to know each other, building relationships, and onboarding new employees (Bergiel et al., 2008; Lehmann, 2003). Additionally, when a meeting topic is complex and requires negotiation and conflict resolution a physical meeting becomes more effective as multiple different communication channels are involved (Hilliges et al., 2007). Physical meetings have been proven to be the most effective meeting type when practical input is needed to work collaboratively (Hilliges et al., 2007; Lehmann, 2003). Furthermore, technology is often absent or shut down during physical meetings that require creative problem solving as technology is often seen as a disruptor to communication and the attendees' creativity (Streitz et al., 1999). Similar findings can be seen in some Lean approaches where e.g., analogue Lean visualization tools have been found to engage the employees more, in comparison with digital visualization tools (Lindlöf & Söderberg, 2011; Nilsson et al., 2019).

3.4 Virtual meetings

Virtual meetings can be conducted as either a telephone conference that only allows audio to be transferred or video conferences that allow both audio and video. According to Wang et al (2021) video conferences are the best suited form of virtual meeting as it allows the attendees to see each other, resulting in a richer communication medium. Rubinger (2020) agrees on this idea and adds that video conferencing becomes even more effective if it is combined with technological solutions that allow chat functionality. Softwares to conduct a virtual meeting include among others e.g., Zoom, Microsoft Teams, and Google Meet.

According to Lehmann (2003) virtual meetings have become a preferred choice by organizations. This is based on two main advantages of virtual meetings, where employees get better time management and the employer reduces their costs. Better time management results in more flexibility and efficiency (Lehmann, 2003; Galanti et al., 2021). Virtual meetings reduce employer's costs because they can be held without people being in the same office building, this results in cost savings in office space, office supplies, and travel expenses (Lehmann, 2003; Galanti et al., 2021). As an example, IBM has estimated that switching from physical to virtual meetings could potentially save the organization 50 million dollars in travel- and downtime costs (Baskerville & Nandhakumar, 2007).

3.4.1 Virtual meeting challenges

Virtual meetings also offer a few challenges, where Richter (2020), Galanti et al. (2020) and Toscano and Zappalà (2020) have found that switching from physical meetings to virtual meetings often results in more meetings. An increase in virtual meetings has been found to result in a decreased productivity and are often seen as wasteful by the respondents as it disturbs them from executing their work responsibilities (Galanti et al., 2020; Toscano & Zappalà, 2020). The four major challenges regarding virtual meetings were found to be *focus*, *communication*, *technology*, and *planning*. These four challenges are explained in Table 2 and will be further described in the upcoming paragraphs.

Table 2: A summary of four identified problems with virtual meetings, their descriptions and the literature that highlights these problems as challenges.

Problem	Description	Litterature
Focus	Virtual meetings are not as monitored as physical meetings, which makes it easier for the attendees to lose focus, starting to work on something else or picking up their phone to look through their social media.	Oeppen et al. (2020), Rubinger et al. (2020), Kuzminykh and Rintel (2020), Lehmann (2003), Galanti et al. (2021), Wang et al. (2021)
Communication	Virtual meetings have limited non-verbal communication exchange, especially with the cameras turned off.	Oeppen et al. (2020), Kuzminykh and Rintel (2020), Lehmann (2003), Galanti et al. (2021), Wang et al. (2021), Majchrzak et al. (2004)
Technology	The hardware, software, and internet bandwidth can negatively influence the virtual meeting quality. Where common technological problems are e.g., video- and audio lag.	Oeppen et al. (2020), Rubinger et al. (2020), Feldman and Mazmanian (2020)
Planning	Inadequate planning results in the attendees not being able to know the purpose and the agenda of the meeting. This often results in inefficiencies in virtual meetings.	Oeppen et al. (2020), Lehmann (2003), Kuzminykh and Rintel (2020).

Focus

Lehmann (2003) mentions that it is hard for speakers to know if the participants are listening to what is being said in virtual meetings. In a virtual meeting it can seem as if the participants are present but may have walked away from their desk or have become distracted by other means if their camera is turned off (Lehmann, 2003; Kuzminykh & Rintel, 2020; Oeppen et al., 2020). Lehmann (2003) mentions that the absence of a camera causes less focus on what is being said in the meeting. Kuzminykh and Rintel (2020) supports this idea as they have found that respondents tend to have less focus on a virtual meeting when they have their camera turned off. The participants in the meeting are more likely to stop paying attention, doing other activities, or multitask when they have their camera turned off in a virtual meeting, decreasing their engagement in the meeting (Kuzminykh & Rintel, 2020). Additionally, Kuzminykh and Rintel (2020) suggest that joining a virtual meeting with the camera turned off could be an indication of less engagement in the meeting. According to Oeppen et al. (2020) it is important for respondents to see themselves during a virtual meeting. Meeting attendees not being observed by themselves or others increases the risk of the attendees losing focus during the meeting (Oeppen et al., 2020). However, Filho et al. (2009) have seen that having the camera turned on results in the attendees feeling uncomfortable, which negatively affects their communication.

Communication

Virtual meetings negatively affect the communication (Lehmann, 2003; Oeppen et al., 2020; Kuzminykh & Rintel 2020; Galanti et al. 2021; Wang et al., 2021; Majchrzak et al. 2004; Filho et al., 2009). According to Lehmann (2003) participants in virtual meetings have limited sensory access as they are not physically in the same room together, resulting in scarce feedback between the participants. This scarce feedback in virtual meetings can result in miscommunication due to the limited non-verbal communication among the participants (Lehmann, 2003; Majchrzak et al., 2004). According to Galanti et al. (2020) the limited non-verbal communication negatively affects the attendees engagement. The lack of non-verbal communication is also suggested to negatively affect the effectiveness of running virtual meetings (Oeppen et al., 2020), as well as the decision making quality (Acai et al., 2018). Using a video camera during virtual meetings will allow non-verbal communication and decrease the potential miscommunication between the participants (Lehmann, 2003; Majchrzak et al., 2004). However, according to Oeppen et al. (2020) even though using a camera positively affects the communication in virtual meetings it should be used moderately to reduce technology issues.

Technology

Virtual meetings depend on technology. Oeppen et al. (2020) mention that having video feeds in virtual meetings may lead to bandwidth issues, resulting in disturbances in the web connection, freezing images, and sound quality. They mention that all of these technological disturbances can result in a lack of focus, engagement, and communication. Rubinger et al. (2020) mention that it is important to prepare the use of technology according to the intended purpose. Testing the audio- and video feed before the meeting and having technical support available could mitigate the occurrence of technological issues (Rubinger et al., 2020). Moreover, the recent technological breakthroughs should result in less technological problems (Soto-acosta, 2020). The technology allows employees to both invite and join virtual meetings effortlessly (Richter, 2020). The ease to invite and join virtual meetings combined with employees not being as visible to their bosses virtually have led to the employees feeling a need to prove their value to the organization (Richter, 2020). Feldman and Mazamanian (2020) agrees on this and adds that virtual meetings have resulted in employees focusing on being active in virtual communication channels rather than working productively with their work responsibilities. However, even though insufficient use of the virtual communication channels can decrease the employees productivity it must be used for sending and receiving information (Richter, 2020; Feldman & Mazamanian, 2020). Additionally, the virtual communication channels allows the employees to plan virtual meetings, set an agenda, and provide information regarding the purpose of the meeting before it takes place (Richter, 2020).

Planning

Adequate preparation before any meeting is important for every participant for them to know the purpose of the meeting, the agenda of the meeting, and why everyone in the invitation list is invited (Lehmann, 2003; Allen et al., 2015; Bagire et al., 2015; Oeppen et al., 2020). According to Lehmann (2003) an agenda is a must when conducting meetings, it results in a

more effective meeting as (1) the participants can prepare themselves and (2) the leader of the meeting can more easily control the meeting discussions with the set agenda points. Oeppen et al. (2020) shares this idea as a timely agenda will help the participants to know why they are participating in the meeting and help the leader to effectively run the meeting. Having an agenda sent out beforehand will also allow meeting documentation, allowing participants to go back and check what was discussed during the meeting, if the aims were achieved, and if further actions are needed (Oeppen et al., 2020). Additionally, not having an agenda during virtual meetings can decrease the participants focus and engagement (Lehmann, 2003; Oeppen et al., 2020; Kuzminykh & Rintel 2020). If participants do not know why they are invited to the meeting they are more likely to shift their attention to something else and start to multitask (Kuzminykh & Rintel 2020). To combat the decrease in the participants focus and potential external distractions during virtual meetings Oeppen et al. (2020) suggests that participants should print out a physical copy of the agenda beforehand to keep track of the meeting progress as it increases their attention and focus on the meeting. The importance of planning before virtual meetings are as important as that of physical meetings where it is crucial that all the participants have read the relevant documents and the agenda beforehand (Oeppen et al., 2020).

4. Method

This section summarizes the method choice to achieve the aim of the case study. The section starts by presenting the problem solving approach, purpose, and strategy. This is followed by a summary of the case study approach, how the data was collected and analyzed, and lastly the reliability and validity of the method.

4.1 Problem solving approach

According to Saunders et al. (2009) there are three main research approaches, deductive, inductive, or abductive. A deductive approach means that through a well elaborated literature review, a hypothesis will be formulated and tested through observation and logical conclusions. An inductive approach means that data is gathered, and from observations of the data hypotheses are formed and later tested through literature. An abductive approach is a mix between deductive and inductive. In this master thesis project, decisions and recommendations were mostly based on the primary data gathered. Therefore, an inductive approach was used in this master thesis project.

4.2 Problem solving purpose

According to Saunders et al. (2009) there are three different research purposes: descriptive, explorative, and explanative. Descriptive means that a certain knowledge exists within the area, and is often suited for research that is aimed to describe a population or a situation. Exploratory purposes are used in newly started projects where new insights or hypotheses are supposed to be formulated. An explanatory study is often used when different hypotheses are going to be tested. As one of the authors has worked part time at Lynk & Co there was existing knowledge of their virtual meeting processes and potential problems. Additionally, the aim of the master thesis is to describe potential problems and solutions regarding the population of Lynk & Co. Therefore, a descriptive problem solving approach was used during the master thesis project.

4.3 Problem solving strategy

According to Saunders et al. (2009) there are several research strategies to pick from when conducting research. Commonly used research strategies are for example experiments, archive studies, and case studies. An experimental research strategy is often used when the researchers want to find a cause and effect relationship between two variables. An archive research strategy is often used when researching internal documents to find information and evidence of individuals or processes. A case study is the preferred strategy when investigating a regular process in its natural setting, and is a good way to gain a deeper understanding regarding the process being studied. Due to the aim of this master thesis, a case study strategy was deemed to be the most suitable one, and was therefore used.

4.4 Case study approach

An overview of the case study approach can be seen in Figure 2. The case study started with familiarization of Lynk & Co's virtual meetings. This was executed to create a deeper understanding of the current situation at Lynk & Co. A review of previous research regarding startups, meetings, physical meetings and virtual meetings followed. This was done to further increase the knowledge of virtual meeting problems and create a foundation for the data collection. A survey was used to gather both quantitative- and qualitative data from Lynk & Co. The quantitative questions in the survey were based on previous research regarding problems in virtual meetings and the virtual meeting experiences of Lynk & Co employees. After the data was collected the data was prepared to enable both qualitative- and quantitative analysis. The quantitative- and qualitative analysis and discussion were executed in parallel to find differences and similarities between the findings. The findings were then used to develop conclusions and recommendations for Lynk & Co.

Familiarization of Lynk
& Co's virtual meetings

↓

Reviewing previous
research

↓

Data collection

↓

Data preparation

Quantitative data
analysis

Qualitative data
analysis

↓

↓

Quantitative results
discussion

Qualitative results
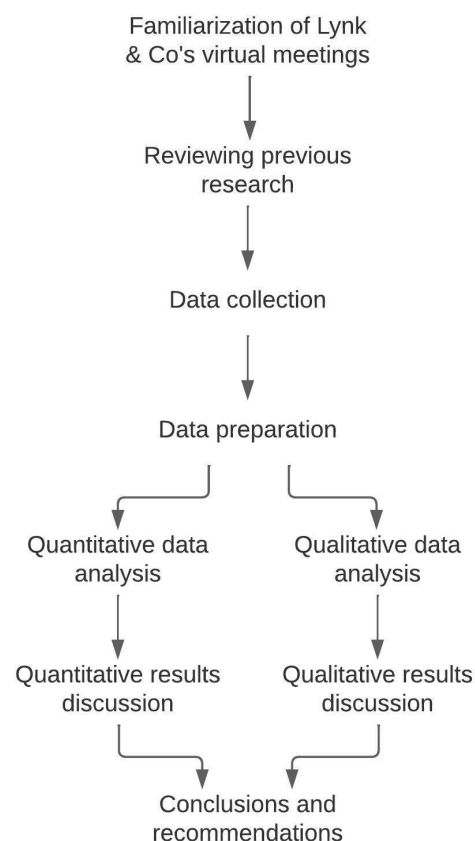discussion

Conclusions and
recommendations

Figure 2: Overview of the case study approach

4.5 Data collection

Surveys are used to systematically collect larger sets of data from a specific population for research purposes (Schwarz et al., 1999). According to Schwarz et al (1999) a survey data collection method can be used when both quantitative- and qualitative data should be gathered as it allows the researcher to ask both numerical- and open ended questions. Jansen (2010) mentions that open ended questions are a good data collection method before interviews or focus groups as it can provide problems and solutions that are worth exploring further. However, depending on the design of the survey and the frequency of similar answers in open survey questions further exploration might not be needed to analyze and develop conclusions (Jansen, 2010; Farrell, 2016).

As the master thesis project is a case study the data collection method should be able to collect larger sets of data from the target population. Additionally, as the aim of this master thesis is to identify (1) if non-value-added time exists, (2) where it exists, (3) why it exists, and (4) how to minimize it, both quantitative and qualitative data must be collected. A survey data collection method was therefore seen as the most suitable method for gathering data. An overview of the survey design method can be found in Figure 3.
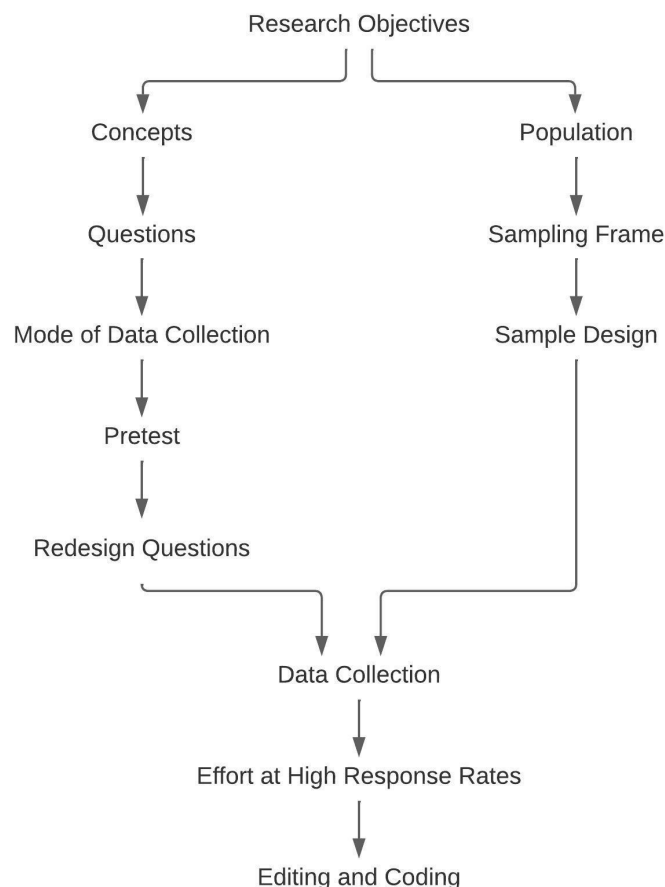

Figure 3: Overview of the survey design method

4.5.1 Survey design

In this master thesis project we used the 10 criterias developed by Draugalias et al (2008) to construct our survey. Table 3 presents a simplified version of the ten survey criterias highlighted by Draugalias et al (2008) and actions taken to live up to the said criterias.

Table 3: Survey criterias defined by Draugalias et al. (2008) and the actions taken to secure fulfillment of the criterias.

Criterias	Definition	Actions
1	Is there a clearly defined research question?	See *1.3 Aim*. Every question in the survey was created with the research question in mind.
2	Have the authors selected respondents that represent the population being studied?	The respondents in the master thesis project were employees at Lynk & Co. The survey was sent to employees that regularly use internal virtual meetings during their workday. The respondents spanned five different age groups and eight different departments.
3	Have the authors designed the survey with a balance between costs and errors (E.g., striving towards minimizing aggressive follow-up surveys)	Every question asked in the survey was carefully considered to minimize potential misunderstandings for the respondents. No follow up survey was used.
4	Have the authors described the research instrument (E.g., the survey, interviews, or focus groups)?	The scoring scheme of the survey questions were mostly based on numerical questions and likert scales explained in *4.5.2 Survey questions*.
5	Was the survey pre-tested?	The survey was pretested to analyze if any questions were misunderstood and to test the reliability (cronbach alpha) of the survey.
6	Are the quality control measures described?	Minimal postsurvey adjustment of errors were needed after the collection of the survey data.
7	Is the response rate sufficient to enable generalization to the target population?	The response rate of the survey can be seen in *5.2 Survey population*. The respondents spanned five different age groups and eight different departments. The discussion regarding the response rate can be seen in *7.1 Generalizability*.
8	Is the statistical, analytical, and reporting techniques appropriate for the data collected?	Univariate-, bivariate-, and multivariate analysis methods were used during the data analysis. This is further explained in *4.6 Data analysis*.
9	Is there evidence of ethical treatment of the human subjects provided?	Respondents decided to take part of the survey freely and their responses were fully anonymous.
10	Are the author(s) transparent to ensure evaluation and replication?	The validity and reliability is explained in *4.7 Reliability*, and *4.8 Validity*.

4.5.2 Survey Questions

The method choice to analyze the responses of a survey is highly dependent on the nature of the collected data (Chambers & Skinner, 2003). Categorical data and continuous response data require different analysis methods to analyze and draw conclusions from the data (Chambers & Skinner, 2003). The survey consisted of both quantitative and qualitative questions and the analysis methods were chosen accordingly (See section *4.6 Data analysis*). This would allow the findings of differences between gender, age groups, employee position, and departments, as well as the ability to generate a model that could explain what variables

affecting the non-value-added time in virtual meetings. The survey had demographic-, numerical-, likert scale-, and open ended questions.

The likert scale questions were based on a scale from one to seven. A one to seven likert scale allows a neutral answer, which have been suggested to improve the reliability and validity of the survey (O'Muircheartaigh et al., 2001). Additionally, a one to seven likert scale allows more variability in the data compared to a one to five likert scale (Krosnick, 2018). Furthermore, using a one to seven likert scale allows the data to somewhat be treated as numerical (Lubke and Munthén, 2004). If the data can be treated as numerical it could be justifiable to use it in e.g., a regression model if the regression model assumptions are met (Lubke and Munthén, 2004). Additionally, the likert scales used in the survey were in an ascending order, where the start and the end of the scale were polar opposites, following the best practice suggested by Boateng et al. (2018). However, likert scales by definition are discrete variables and do not have the prerequisites for statistical analysis (E.g., PCA, and regression analysis) (Kolenikov & Angeles, 2009). This problem was mitigated by constructing indices, i.e., the sum of two or more scores of a likert scale question. Constructing indices enables the data to have a broader range and variability (Allen & Seaman, 2007). The broader range and variability of an index allows the data to have more properties similar to a continuous variable, resulting in the index being more suitable for statistical analysis (Allen & Seaman, 2007).

The final survey had 4 demographic questions, 2 numerical questions, 18 likert scale questions, 5 open ended questions, and 4 constructed indices. The four constructed indices and their items (likert scale questions) were developed based on previous research regarding virtual meeting challenges, see Table 2, and virtual meeting experiences from Lynk & Co employees. *Construct 1* related to the most common virtual meeting problems at Lynk & Co. *Construct 2* related to activities before the virtual meetings. *Construct 3* related to activities during the virtual meetings. *Construct 4* related to employees' own efforts regarding the communication before the virtual meetings. The constructed indices were the sum of three or more likert scale questions. The constructs and their likert scale questions can be seen in Table 4. The final survey can be seen in Appendix 1.

Table 4: The four constructs and their corresponding likert scale questions.

Construct	Likert scale question
Construct 1	*C1* (Meeting caller was not well prepared)
	C1 (Meeting attendees were not well prepared)
	C1 (Information given was not relevant to me)
	C1 (Key persons did not attend the meeting)
	C1 (Meeting could have been replaced with an email)
	C1 (Employees with the same knowledge attended the meeting)
Construct 2	*C2* (I know what the meeting will focus on)
	C2 (There is a clear agenda regarding the topics that will be discussed during the meeting)
	C2 (I know why I am called to the meeting)
Construct 3	*C3* (I am fully focused on the things being said during the meeting (For example, I do not multitask))
	C3 (I have my camera turned on during the meeting)
	C3 (I am active in the conversations during the meeting)
Construct 4	*C4* (I only invite the persons needed in my meetings)
	C4 (I do not invite several people with the same knowledge)
	C4 (I am well prepared for my meetings)
	C4 (I send a detailed agenda with my meeting invites)

4.5.3 Survey pre-test

A survey pre-test was conducted to analyze both the validity and reliability of the master thesis project (Draugalis et al., 2018). Additionally, a survey pre-test can highlight phrasing errors and enable Cronbach alpha reliability tests (Boateng et al., 2008) The survey was sent to the supervisor at Lynk & Co to get input regarding the phrasing of the questions and if something crucial related to the aim of the master thesis was missing. Additionally, the survey was sent out to a sample size of 15 Lynk & Co employees to enable them to highlight potential improvements and assess the variability of the answers.

A reliability test was conducted with the help of a Cronbach alpha test. The Cronbach alpha test assesses the degree of which the items in the survey co-vary relative to their sum, assessing the internal consistency of the survey results (Cronbach, 1951). A Cronbach alpha test is often used when the survey has indices that are constructs of two or more likert scales to see if the likert scale questions will be efficient enough to measure the same underlying

construct i.e., the indices (Cronbach, 1951). For a more in-depth knowledge regarding Cronbach alpha tests refer to Cronbach (1951) - *Coefficient alpha and the internal structure of tests*. A Cronbach alpha test was done for all of the survey's four constructs with the help of the software Statgraphics Centurion to see if some questions need to be rephrased or discarded for the final survey.

Different schools of research assess Cronbach Alphas differently ,where the broad majority argues that an alpha of 0,7 or higher is adequate (Bernstein & Nunnally, 1994). Perry et al. (2004) agrees that an alpha over 0,7 is acceptable, however, they also mention that a Cronbach alpha between 0,5 and 0,7 shows a moderate amount of reliability. This master thesis project followed the suggestions of Perry et al. (2004).

4.5.4 Survey population

The final survey was sent out via email to 718 Lynk & Co employees. The survey was sent to the employees of the following departments: Communication, Commerce, Operation, Finance, IT, Strategy, Legal, and HR. The survey was not sent out to all Lynk & Co employees as some employees are not affected by internal virtual meetings. One email reminder to answer the survey was sent out to get a larger number of responses. Additionally, there were employees that answered the survey which did not belong to any of the departments specified in the survey. Therefore an additional department category named "Other" was created.

4.6 Data Analysis

Data collected from the survey were analyzed using both quantitative and qualitative methods. Quantitative data were analyzed using Excel and Statgraphics centurion. Qualitative data were analyzed using a thematic analysis approach.

4.6.1 Quantitative data analysis

Both Microsoft Excel and Statgraphics Centurion were used to analyze the quantitative data. Excel was used to find potential demographic differences. Statgraphics Centurion was used to conduct Cronbach alpha tests and multiple regression analysis.

Data preparation
To analyze the survey quantitative data, the data need to be coded. That is, input data for fitting the model must be quantitative (Cohen et al., 2014). The likert scales were coded to quantitative variables i.e., from *never* to *always* to *one* to *seven*. All the likert scales were coded before the analysis in Excel and Statgraphics Centurion.

Demographic variables
The demographic variables were analyzed by themselves to see if there was a difference in *Hours in meetings per day* and *Wasted hours in meetings per day* between the demographic variables gender, age, employee position, and departments. This was done by using both

univariate- and bivariate analysis methods in Microsoft Excel, where pivot Tables and graphs were used to illustrate the differences between the categorical variables.

Cronbach alpha
A Cronbach alpha test was used to see the internal reliability of the four constructs used in the survey for the total population. This Cronbach alpha test followed the same method as described in *4.5.3 Survey pre-test*.

Regression models
Multiple regression models were used to see which numeric- and likert scale variables significantly affects the *Wasted hours in meetings per day*. A multiple regression model explains the relationship between the dependent variable and the independent variables. The model parameters are estimated via the ordinary least squares method (Montgomery et al., 2021; Draper & Smith, 1998). This method is according to Peterson et al. (2010) the most commonly used multivariate analysis method in social sciences. Many scholars (Cao et al., 2021; Al-Musali & Ismail, 2015; Bagire et al., 2015) have used it in social science research.

Two regression models were developed during the master thesis project. The first regression model had the dependent variable as *Wasted hours in meetings per day*. The independent variables used in the model are listed below.

- *Hours in meetings per day*
- *Construct 1*
- *Construct 2*
- *Construct 3*
- *Construct 4*

The independent variables used in the regression model were based on previous research and virtual meeting experiences from Lynk & Co employees. The results of the first regression model were used to further analyze how the single items (i.e., likert scale questions) in each construct affect the dependent variable. The variables taken into account in the second regression model were those that resulted as significant from the previous regression model.

There are controversies regarding the usage of likert scale questions in regression analysis as the likert scale is not seen as a continuous variable (Knapp, 1990; Kolenikov & Angeles, 2009). However, according to Lubke and Muthén (2004) using likert scales that are based on a scale from one to seven can somewhat be treated as numerical, which results in them being justifiable if the regression model assumptions are met. Therefore, dividing the four constructs into their single items (i.e., likert scale questions) were seen as an appropriate method to analyze the independent variables further.

The regression models were assessed via the p-value and the R-squared value. The p-value is used to see if the independent variables have a statistically significant relationship with the dependent variable (Montgomery et al., 2021). The most commonly used p-value in statistical

analysis is 0,05 (Montgomery et al., 2021). The R-squared value is used to represent the model's capability of explaining the total variability of the dependent variable (Montgomery et al., 2021). In social sciences, a R-squared value of 10% or more is adequate to explain the variance of the underlying dependent variable (Falk & Miller, 1992).

In this master thesis project we considered a p-value of 0,05 and a R-squared value over 10%. The regression models were simplified using a backwards selection method. A backwards selection method is when the insignificant independent variables are removed from the regression model one at a time (Montgomery et al., 2021). Backward selection is commonly used because the p-values of the remaining independent variables decrease when one independent variable is removed (Montgomery et al., 2021). This method increases the likelihood that all significant independent variables are kept in the model.

Regression model adequacy
There are five major assumptions that must be made to assess a multiple regression model adequacy (Montgomery et al., 2021). Table 5 shows the assumptions, their descriptions and the actions to take to assure their validity.

Table 5: Multiple regression model assumptions and the actions to take to assure the assumptions, adapted from Montgomery et al. (2021)

Assumptions	Actions to take
Linearity	Observe the linearity plots.
No outliers	Observe the residual probability plots.
Variance of residuals	Observe the residual plots.
Normality of Residuals	Conduct a normality test.
No multicollinearity	Observe the correlations between the independent variables.

4.6.2 Qualitative data analysis

Qualitative data gathered from the survey were analyzed using a thematic analysis. The thematic analysis was useful to find common themes from the open questions in the survey.

Thematic analysis
There are four situations where a thematic analysis is specifically good to use:

- Data interpretation - When there is an issue caused by a number of factors and variables that should be detected a thematic analysis is recommended (Hatch, 2002).
- Deductive and inductive approaches - When a study is using a deductive or inductive approach, a thematic analysis is appropriate (Frith & Gleeson, 2004)

- Analysis of two different phased data - A thematic analysis is appropriate when the study aims to understand the current practices of any individual, before and after a certain implementation (Miles & Huberman, 1994).
- Coding and categorizing - If the data collection methods allow for the practice of coding and categorizing of themes, a thematic analysis is a suitable method of analysis (Braun & Clarke, 2006).

In this master thesis project an understanding of the factors affecting meeting efficiency was sought after, an inductive approach was used, the master thesis project was recommended to be re-done later on to compare the data, and it was of interest to find the largest categories of issues within Lynk & Co's meeting culture. For this reason, a thematic analysis was considered suitable. The thematic analysis in this master thesis project was conducted following the steps described in Table 6.

Table 6: Thematic analysis steps as described according to Braun and Clarke (2006).

Processes	Process description
Familiarization of the data	Read through the qualitative answers to get a better understanding of the collected data.
Create initial codes	Code the data into specific features over the entire data set.
Search for themes	Search and create common denominators for the codes. All data relevant to each common denominator should be gathered.
Review themes	Review the common denominators in relationship to the codes and the entire data set. Create a thematic map of the analysis.
Define themes	Refine specifics of each theme and generate definitions and names for each theme.
Produce the findings	Analyze broad and compelling citations in relationship to the aim of the study to produce the analysis.

4.7 Reliability

Reliability refers to trustworthiness of the study, where a high reliability is achieved when the method produces consistent results (Patel & Davidson, 2011). Reliability is often divided into internal reliability and external validity (Patel & Davidson 2011; Saunders et al., 2009).

Internal reliability refers to the internal trustworthiness of a study. A high internal reliability is found when the result of the data collection is the same regardless of who the respondent is (Patel & Davidson, 2011). A Cronbach alpha test was conducted both in the survey pre-test and the final survey to assess the internal reliability. The Cronbach alpha's for the four constructs in the final survey can be seen in *5.3 Cronbach alpha*.

External reliability refers to the ability of a study to provide the same results if the same study is either conducted at a later occasion or at another location (Saunders et al., 2009). Since the

same meeting issues have existed for a long time, it can perhaps be assumed that the reasons for this lie in human nature. A meeting culture is most likely related to organizational culture. A behavioral change requires substantial effort in changing the company culture (By, 2005; Burnes, 2015), and could therefore result in the same issues being apparent regardless of time. In the long term however, the reliability becomes harder to estimate. As of now, virtual meetings are conducted through softwares such as Zoom, Microsoft Teams, and Google Meet. In the future there might be a replacement to these softwares which allows for more human interaction, and therefore makes virtual meetings more realistic than they are today (Campbell et al., 2019). For this reason, the external reliability of this master thesis could be seen as adequate for the moment, but depending on the future evolution of virtual meetings it can be outdated. However, the external reliability might have suffered as a thematic analysis approach was used during the master thesis project. A thematic analysis approach is often subjective to researcher bias and could therefore result in other researchers to find different common themes and definitions (Braun & Clarke, 2006). This should be considered if this master thesis project, or a similar project following the same methodology were to be executed at a later occasion or at another location. To mitigate this and strengthen the external reliability the master thesis authors focused on being transparent regarding both the data collection method and the data analysis method. This could enable researchers to conduct similar research in the future (Yin, 2009).

4.8 Validity

Validity refers to the study's ability to accurately measure what the study is intended to measure (Patel & Davidson, 2011). Validity is often divided into internal validity and external validity (Patel & Davidson 2011; Saunders et al., 2009).

Internal validity refers to the internal relevance of the data gathered, where high internal validity is achieved when the methods used in the study results in gathered data that will fulfill the aim of the study (Saunders et al., 2009). To reduce the risk of low validity an email was sent out to the respondents a week in advance, highlighting that a survey will be sent out within a week, encouraging the respondents to reflect on the upcoming meeting experiences before answering the survey. Furthemore, the survey questions were based on previous experiences one of the authors had from working at Lynk & Co, issues that through informal conversations had been reported as weaknesses in Lynk & Co's virtual meetings and previous literature regarding virtual meetings, potentially increasing the validity of the survey. To further reduce the risk of low validity regarding the survey, detailed instructions and descriptions were used.

External validity focuses on the external relevance of the data gathered, where high external validity is found when the result of the study can be generalized to a broader population (Saunders et al., 2009). Case studies are in nature hard to generalize since the study only focuses on a specific case without any control group(s), resulting in a highly unique study (Yin, 2009). However, the method used in this master thesis project could be used to conduct similar studies at other companies with similar or other issues.

5. Results

This section summarizes the results from Lynk & Co. The section starts by presenting the results from the Survey pre-test, the survey population and the Cronbach alpha for the total survey population. This is followed by the results from the quantitative- and qualitative data.

5.1 Survey pre-test

11 out of 15 employees answered the survey pre-test, yielding a response rate of 73,3%. Three employees suggested improvements to the questions, highlighting phrasing and anonymity concerns. A summary of the changes from the suggested improvements can be seen in Appendix 2.

The results from the Cronbach alpha test for the survey pre-test can be seen in Table 7.

Table 7: Item constructs and their respective Cronbach alpha for the pre-test

Construct	Cronbach alpha
Construct 1	0,8885
Construct 2	0,7491
Construct 3	0,1740
Construct 4	0,6922

Construct 3 did not reach the threshold of 0,5 as suggested by Perry et al. (2004) and should therefore either be disregarded or rephrased to get higher internal consistency. According to Cronbach (1951) a low Cronbach alpha could be a product of either heterogeneous questions or poor interrelatedness. After further testing it was determined that an item (Likert scale question) in *Construct 3* needed to be rephrased. This was because the items in *Construct 3* had opposite positive- and negative answers, illustrated in Table 8. The illustration of the positive- and negative answers after the rephrasing of the items in *Construct 3* can be seen in Table 9. See Appendix 3 for the analysis which led to the rephrasing.

Table 8: Illustration of the positive and negative answers for the items in *Construct 3* before the rephrasing

Items in Construct 3	Likert scale		
C3 - I multitask in the meetings I attend	Positive	1 2 3 4 5 6 7	Negative
C3 - I have my camed turned on during the meetings I attend	Negative	1 2 3 4 5 6 7	Positive
C3 - I am active in the meetings I attend	Negative	1 2 3 4 5 6 7	Positive

Table 9: Illustration of the positive and negative answers for the items in *Construct 3* after the rephrasing

Items in Construct 3	Likert scale		
C3 - I am fully focused on the things being said during the meeting (For example, I do not multitask)	Negative	1 2 3 4 5 6 7	Positive
C3 - I have my camed turned on during the meetings I attend	Negative	1 2 3 4 5 6 7	Positive
C3 - I am active in the meetings I attend	Negative	1 2 3 4 5 6 7	Positive

5.2 Survey population

The survey was sent out to 718 employees, where 104 answered the survey without an email reminder, resulting in a response rate of 14,5%. An email reminder was sent out after two days in an effort to increase the response rate, resulting in a total of 162 answers, which corresponds to a response rate of 22,6%. However, some answers had to be discarded as eight of the respondents had missing data, and 11 respondents were from the survey pre-test, resulting in a total of 143 survey answers. This corresponds to a final response rate of 19,9%. The answers ranged from different genders, age groups, employee positions, and departments within Lynk & Co. See Appendix 4 for the demographic variety of the survey respondents.

5.3 Cronbach alpha

Cronbach alpha tests were conducted for the four constructs for the entire survey population to assess the internal reliability of the master thesis project. The Cronbach alpha's for the four constructs can be seen in Table 10.

Table 10: Item constructs and their respective Cronbach alpha for the entire survey population

Construct	Cronbach alpha
Construct 1	0,7116
Construct 2	0,5069
Construct 3	0,7514
Construct 4	0,6773

As an alpha of 0,5 or higher is considered to be a measure of moderate internal reliability (Perry et al., 2004), all the likert based constructs in the survey can be said to have moderate internal reliability. This results in the answers being consistent within the four constructs and can therefore be used to further analyze the results.

5.4 Demographic results

This section summarizes the differences between the demographic variables gender, age group, employee position, and departments.

5.4.1 Gender

There are minimal- to no differences between both the number of *Hours in meetings per day* and the number of *Wasted hours in meetings per day* depending on if you are a male or a female. The difference between the genders of the two variables is roughly 0,1 and 0,01 hours per day respectively. This results in both males and females believing that there is around 35% of wasted time in the meetings at Lynk & Co.

5.4.2 Age group

Figure 4a shows that there are differences between the number of *Hours in meetings per day* depending on the employee's age group. The number of *Hours in meetings per day* increases as the age group increases from age group 21-30 to age group 51-60. Figure 4b shows that there are differences between the number of wasted hours per day depending on the employee's age group. The number of wasted hours per day are higher at lower age groups and decreases as the age groups increase, where the age group 31-40 have the highest *Wasted hours in meetings per day* and the age group 61-70+ have the lowest *Wasted hours in meetings per day*.
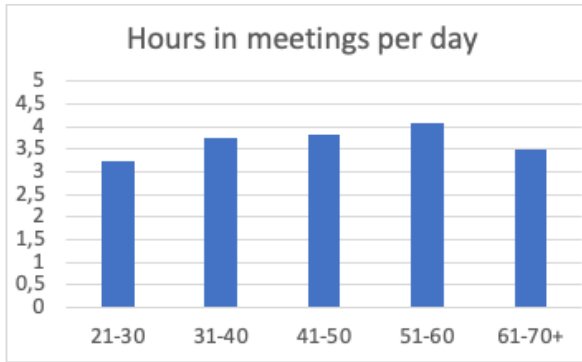
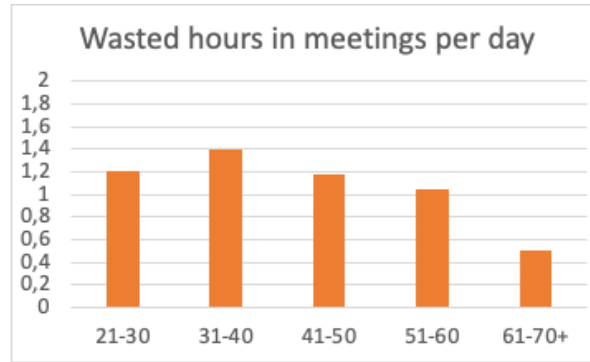Figure 4a: *Hours in meetings per day* dependent on Age Group

Figure 4b: *Wasted hours in meetings per day* dependent on Age Group

Figure 5 shows the distribution of efficient- and wasted time in meetings for the different age groups. As seen in Figure 5, there are differences between the age groups where the percentage of wasted time in meetings reduces for each subsequent age group after the age group of 31-40 year olds. Figure 5 also shows that both the age groups of 21-30 and 31-40 believe that there is around 38% wasted time in the meetings at Lynk & Co.
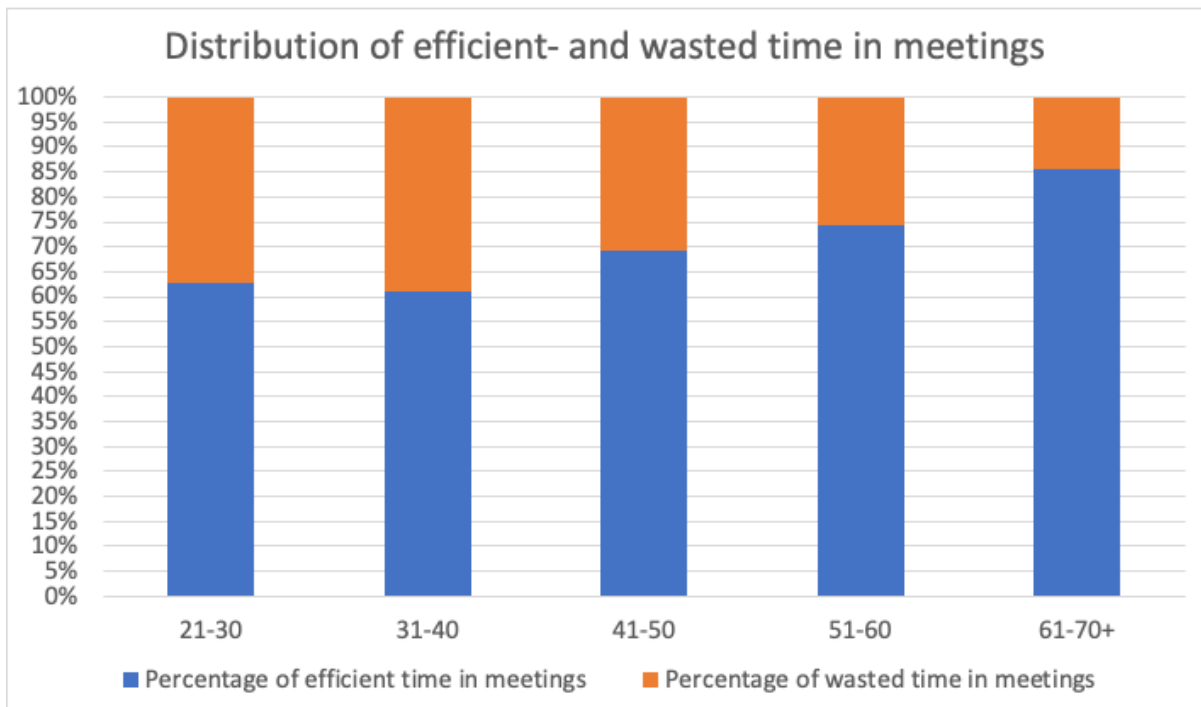

Figure 5: Distribution of efficient- and wasted time in meetings for different age groups

5.4.3 Employee position

Figure 6a shows that there are large differences between the number of *Hours in meetings per day* depending on if you are a manager or not, where the numeric difference is roughly 1,4 hours per day. Figure 6b shows that there are large differences between the number of *Wasted*

hours in meetings per day depending on if you are a manager or not, where the numeric difference is roughly 0,65 hours per day.

Figure 6a: *Hours in meetings per day* dependent on being a manager or not

Figure 6b: *Wasted hours in meetings per day* dependent on being a manager or not

Figure 7 shows the distribution of efficient- and wasted time in meetings depending on the respondent being a manager or not. As seen in Figure 7, managers believe that there is a higher percentage of wasted time in the meetings at Lynk & Co than employees that are not managers, a difference of 6,3 percentage points.
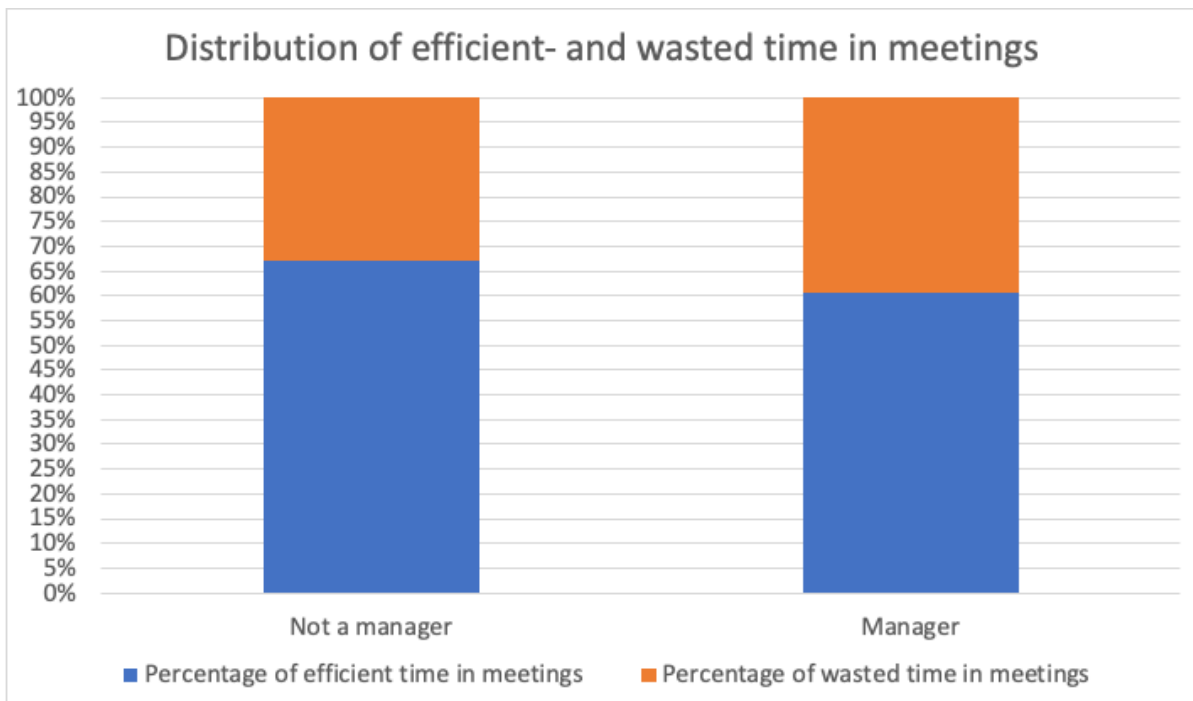

Figure 7: Distribution of efficient- and wasted time in meetings dependent on the respondent being a manager or not

5.4.4 Department

Figure 8a shows that there are differences between the number of *Hours in meetings per day* depending on the departments. The number of *Hours in meetings per day* are highest in the Other-, Strategy-, IT-, and Communication department, whereas the HR- and Commerce department have the lowest number of *Hours in meetings per day*. Figure 8b shows that there are differences between the number of *Wasted hours in meetings per day* depending on the departments. The number of *Wasted hours in meetings per day* are highest in the IT-, and communication departments whereas the HR- and finance department have the lowest *Wasted hours in meetings per day*.
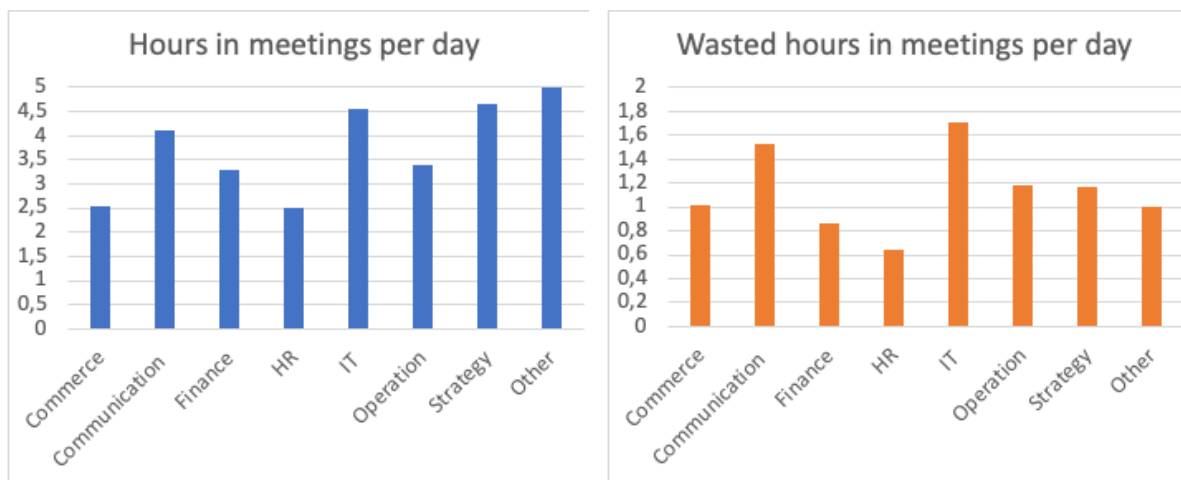
Figure 8a: *Hours in meetings per day* dependent on department

Figure 8b: *Wasted hours in meetings per day* dependent on department

Figure 9 shows the distribution of efficient- and wasted time in meetings for different departments. As seen in Figure 9, the commerce-, operation-, communication, and IT departments believe that 35-40% of the meeting hours at Lynk & Co are wasted time whereas the finance-, HR-, Strategy-, and Other department are between 20-30%.
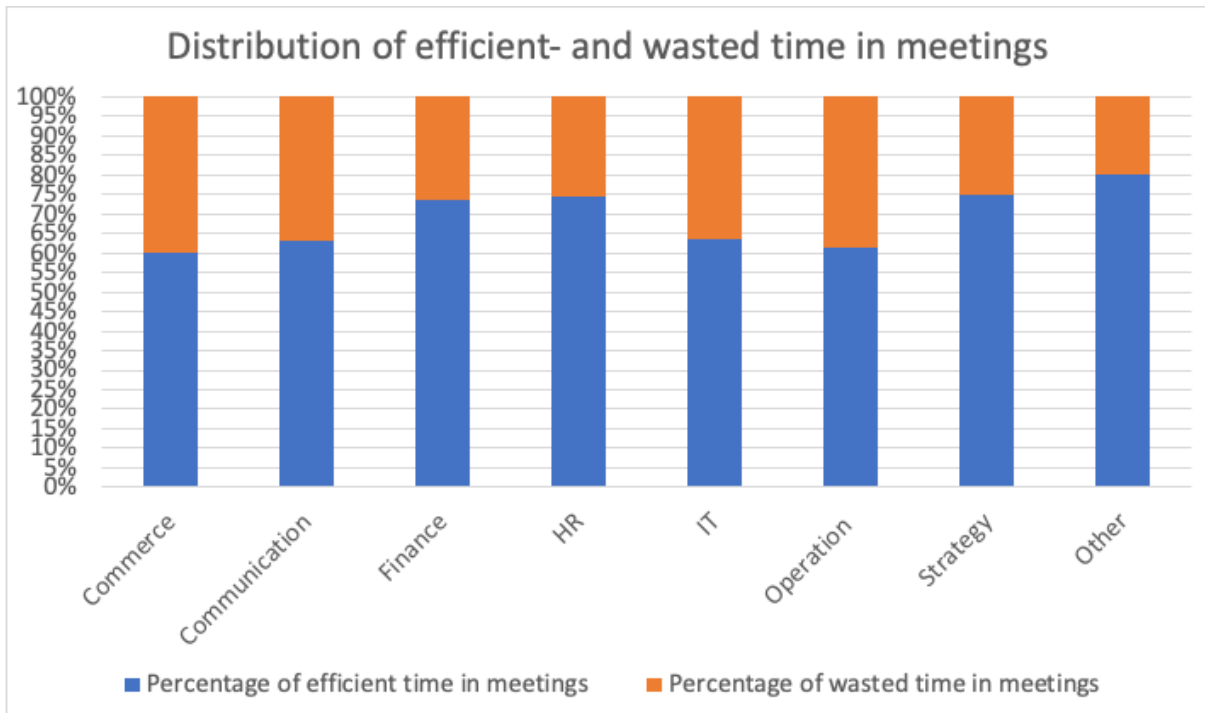
Figure 9: Distribution of efficient- and wasted time in meetings for different departments

5.5 Hours in meetings per day and wasted hours in meetings per day

Table 11 shows the average *Hours in meetings per day* per day and the average *Wasted hours in meetings per day*. The table also addresses if the answers to the questions should be minimized, maximized, or neutral.

Table 11: The average *Hours in meetings per day* and the average *Wasted hours in meetings per day*

Numeric Question	Average	Min/Max
Hours in meetings per day	3,64	Neutral
Wasted hours in meetings per day	1,28	Minimize

Table 11 shows that the average employee at Lynk & Co has 3,64 meeting hours per day where 1,28 of them are wasted meeting hours. This results in employees believing that 35,2% of the time in meetings is wasted.

5.6 Likert scale results

This section presents the results from the likert scale questions in the survey. Two standalone likert scale questions are presented first, followed by the items (likert scale questions) in the four constructs.

The average likert scale answers tended to be around four and five, on a scale ranging from one to seven, thereby showing a rather neutral answer. Therefore, the results were interpreted by looking at which side of the neutral point (four) the average were.

5.6.1 Standalone likert scale questions

When looking at Table 12 it is important to note that the likert scale question *There are more meetings than necessary* should be minimized and the likert scale question *Meeting quality index* should be maximized.

Table 12: The average answers of the two standalone likert scale questions in the survey and if the answers should be minimized, maximied, or remain neutral. The likert scale questions were based on a scale from one to seven.

Likert scale question	Average	Min/Max
There are more meetings than necessary	4,85	Minimize
Meeting quality index	4,50	Maximize

5.6.2 Constructs

The four upcoming tables show the average answer from the items (likert scale questions) in the survey's four constructs. Table 13 shows the average answers of the items in *Construct 1*. Table 14 shows the average answers of the items in *Construct 2*. Table 15 shows the average answers of the items in *Construct 3*. Table 16 shows the average answers of the items in *Construct 4*. It is important to note that the average answers of the items in *Construct 1* should be minimized whereas the average items in *Construct 2, 3*, and *4* should be maximized.

Table 13: The average answers of the items (likert scale questions) in *Construct 1* and if the answers should be minimized, maximied, or remain neutral. The likert scale questions were based on a scale from one to seven.

Likert scale question	Average	Min/Max
C1 (Meeting caller was not well prepared)	3,88	Minimize
C1 (Meeting attendees were not well prepared)	4,27	Minimize
C1 (Information given was not relevant to me)	4,02	Minimize
C1 (Key persons did not attend the meeting)	4,08	Minimize
C1 (Meeting could have been replaced with an email)	4,24	Minimize
C1 (Employees with the same knowledge attended the meeting)	4,33	Minimize

Table 14: The average answers of the items (likert scale questions) in *Construct 2* and if the answers should be minimized, maximied, or remain neutral. The likert scale questions were based on a scale from one to seven.

Likert scale question	Average	Min/Max
C2 (I know what the meeting will focus on)	4,93	Maximize
C2 (There is a clear agenda regarding the topics that will be discussed during the meeting)	3,97	Maximize
C2 (I know why I am called to the meeting)	4,79	Maximize

Table 15: The average answers of the items (likert scale questions) in *Construct 3* and if the answers should be minimized, maximied, or remain neutral. The likert scale questions were based on a scale from one to seven.

Likert scale question	Average	Min/Max
C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))	4,40	Maximize
C3 (I have my camera turned on during the meeting)	5,32	Maximize
C3 (I am active in the conversations during the meeting)	5,07	Maximize

Table 16: The average answers of the items (likert scale questions) in *Construct 4* and if the answers should be minimized, maximied, or remain neutral. The likert scale questions were based on a scale from one to seven.

Likert scale question	Average	Min/Max
C4 (I only invite the persons needed in my meetings)	5,44	Maximize
C4 (I do not invite several people with the same knowledge)	4,94	Maximize
C4 (I am well prepared for my meetings)	5,30	Maximize
C4 (I send a detailed agenda with my meeting invites)	4,42	Maximize

5.7 Regression models

This section presents the result of the two multiple regression models that were conducted. Both multiple regression models had *Wasted hours in meetings per day* as the dependent variable. Both regression models had independent variables that were based on previous research and virtual meeting experiences from Lynk & Co employees. However, the second regression model was used to further analyze how the single items (Likert scale questions) in each construct affect the dependent variable. The variables taken into account in the second regression model were those that resulted as significant from the previous regression model.

5.7.1 Regression model one

The data from the first regression model can be seen in Table 17. The table shows the *Regression coefficient*, *standard error*, *T statistic*, and *p-value* for the independent variables.

Table 17: The regression model data for the first regression model. The model has *Wasted hours in meetings per day* as the dependent variable. The independent variables are shown in the column named *Parameter*.

Parameter	Regression coefficient	Standard Error	T Statistic	p-value
Constant	-0,787799	0,810499	-0,971993	0,3328
Hours in meetings per day	0,358754	0,0363876	9,85925	0,0000
Construct 1	0,0550111	0,018217	3,01977	0,0030
Construct 2	-0,00821885	0,0259115	-0,317189	0,7516
Construct 3	-0,078242	0,0249855	-3,13150	0,0021
Construct 4	0,0316179	0,0191907	1,64756	0,1017

Table 17 shows that *Hours in meetings per day*, *Construct 1*, and *Construct 3* have a P-value lower than 0,05 indicating a statistically significant effect on *Wasted hours in meetings per day*. Whereas *Construct 2*, and *Construct 4* do not have a statistically significant effect. The R-squared, the R-squared adjusted, and the p-value for this regression model are 56,68%, 55,09%, and 0,000 respectively.

A simplification of this regression model where the non-significant independent variables were removed from the model can be seen in Table 18. The table shows the *Regression coefficient*, *standard error*, *T statistic*, and *p-value* for the independent variables.

Table 18: The regression model data for the first regression model after the simplification. The model has *Wasted hours in meetings per day* as the dependent variable. The independent variables are shown in the column named *Parameter*.

Parameter	Regression coefficient	Standard Error	T Statistic	p-value
Constant	-0,46896	0,5522	-0,8429257	0,3972
Hours in meetings per day	0,36465	0,0362166	10,0686	0,0000
Construct 1	0,0556111	0,0154863	3,59099	0,0005
Construct 3	-0,0669072	0,0236204	-2,8326	0,0053

The regression coefficients in Table 18 shows that both *Hours in meetings per day* and *Construct 1* increases the *Wasted hours in meetings per day*, whereas *Construct 3* decreases the *Wasted hours in meetings per day*. This results in the following model:

$$Wasted\ hours\ in\ meetings\ per\ day\ (Predicted)\ =\ 0,36465 \bullet Hours\ in\ meetings + 0,0556111 \bullet Construct\ 1 - 0,0669072 \bullet Construct\ 3$$

The *R-squared*, the *R-squared adjusted*, and the *p-value* for this simplified regression model are 55,80%, 54,85%, and 0,000 respectively. Model adequacy check has been conducted to validate the regression mode. The results of the diagnostic methods show that there is no violation of the regression model assumptions (see Appendix 5 for detailed plots and information).

5.7.2 Regression model two

The single items of each significant construct from the first regression model were used as independent variables to fit a second regression model. The significant variable *Hours in meetings per day* was also taken into consideration as the aim of the second regression model was to create a working model with all the potential variables that can affect the *Wasted hours in meetings per day*.

The data from the second regression model can be seen in Table 19. The table shows the *Regression coefficient*, *standard error*, *T statistic*, and *p-value* for the independent variables.

Table 19: The regression model data for the second regression model. The model has *Wasted hours in meetings per day* as the dependent variable. The independent variables are shown in the column named *Parameter*.

Parameter	Regression coefficient	Standard Error	T Statistic	p-value
Constant	-0,90155	2,37494	-0,37961	0,7048
Hours in meetings per day	0,392338	0,0340736	11,5144	0,0000
C1 (Meeting caller was not well prepared)	-0,0309787	0,0679844	-0,455674	0,6494
C1 (Meeting attendees were not well prepared)	0,0654081	0,0684788	0,955158	0,3412
C1 (Information given was not relevant to me)	0,0765053	0,0711932	1,07462	0,2845
C1 (Key persons did not attend the meeting)	-0,11479	0,0496067	-2,314	0,0222
C1 (Meeting could have been replaced with an email)	0,323109	0,0570728	5,66135	0,0000
C1 (Employees with the same knowledge attended the meeting)	0,0000013678	0,00011201	0,122115	0,9030
C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))	-0,0720249	0,0453112	-1,58956	0,1143
C3 (I have my camera turned on during the meeting)	-0,0234223	0,0428884	-0,546122	0,5859
C3 (I am active in the conversations during the meeting)	-0,0945479	0,0651114	-1,45209	0,1488

Table 19 shows that *Hours in meetings per day, C1 (Key persons not attending the meeting)*, and *C1 (The meeting could have been replaced with an email)* have a *p-value* under 0,05 indicating that they have a statistically significant effect on *Wasted hours in meetings per day*.

The *R-squared*, the *R-squared adjusted*, and the *p-value* for this regression model are 65,92%, 63,34%, and 0,000 respectively. A simplification of this regression model where the

non-significant independent variables were removed from the model can be seen in Table 20. However, using the backward selection method resulted in the variable *C3 (I am active in the conversations during the meeting)* having a *p-value* under 0,05, indicating a statistically significant effect. Additionally, the backward selection method also resulted in the variable *C3 (I am fully focused on the things being said during the meeting (For example I do not multitask))* having a p-value of 0,0723, potentially indicating that the variable have a significant effect on *Wasted hours in meetings per day*. Since a p-value of 0,0723 is relatively close to 0,05 and because the previous model had *Construct 3* as a statistically significant effect with a p-value under 0,05 we considered it appropriate to keep the variable in the simplified version of regression model two.

Table 20: The regression model data for the second regression model after the simplification. The model has *Wasted hours in meetings per day* as the dependent variable. The independent variables are shown in the column named *Parameter*.

Parameter	Regression coefficient	Standard Error	T Statistic	p-value
Constant	-0,358761	0,405104	-0,885603	0,3774
Hours in meetings per day	0,401484	0,0321515	12,4872	0,0000
C1 (Key persons did not attend the meeting)	-0,1069	0,0459007	-2,32894	0,02130
C1 (Meeting could have been replaced with an email)	0,356961	0,0506022	7,05426	0,0000
C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))	-0,0786521	0,0434306	-1,81098	0,0723
C3 (I am active in the conversations during the meeting)	-0,115264	0,0556404	-2,07159	0,0402

The regression coefficients in Table 20 shows that both *Hours in meetings per day* and *C1 (Meeting could have been replaced with an email)* increases the *Wasted hours in meetings per day*. The independent variables *C1 (Key persons did not attend the meeting)*, *C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))*, and *C3 (I am active in the conversations during the meeting)* decreases the *Wasted hours in meetings per day*. See Table 21 for the independent variables regression coefficient and their relationship to the dependent variable.

Table 21: The independent variables and their relationship to the dependent variable. The independent variables are shown in the column named *Parameter*.

Parameter	Regression coefficient	Relationship to the dependent variable
Hours in meetings per day	0,401484	Increases
C1 (Key persons did not attend the meeting)	-0,1069	Decreases
C1 (Meeting could have been replaced with an email)	0,356961	Increases
C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))	-0,0786521	Decreases
C3 (I am active in the conversations during the meeting)	-0,115264	Decreases

This results in the following model:

$$Wasted\ hours\ in\ meetings\ per\ day\ (Predicted) = 0,401484 \bullet Hours\ in\ meetings\ per\ day - 0,01069 \bullet C1\ (key\ persons\ did\ not\ attend\ the\ meeting) + 0,356961 \bullet C1\ (Meeting\ could\ have\ been\ replaced\ with\ an\ email) - 0,0786521 \bullet C3\ (I\ am\ fully\ focused\ on\ the\ things\ being\ said\ during\ the\ meeting) - 0,115264 \bullet C3\ (I\ am\ active\ in\ the\ conversations\ during\ the\ meeting)$$

The *R-squared*, the *R-squared adjusted*, and the *p-value* for this simplified regression model are 65,34%, 64,07%, and 0,000 respectively. Model adequacy check has been conducted to validate the regression mode. The results of the diagnostic methods show that there is no violation of the regression model assumptions (see Appendix 6 for detailed plots and information).

5.8 Survey qualitative data

For the survey's qualitative data, a thematic analysis was conducted to categorize the gathered data and find the larger themes that are currently causing the most amount of inefficiencies in Lynk & Co's virtual meetings. Answers that were found to be important from the open-ended questions in the survey are presented between sections *5.8.2 Before the meeting - 5.8.4 Suggestions for improvement*. Some of the answers from the questions were not common enough to be included in the thematic analysis, however they are still mentioned between sections *5.8.2 Before the meeting - 5.8.4 Suggestions for improvement*.

5.8.1 Thematic analysis

Through the thematic analysis, two themes and four sub themes were identified. These can be found in Figure 10.
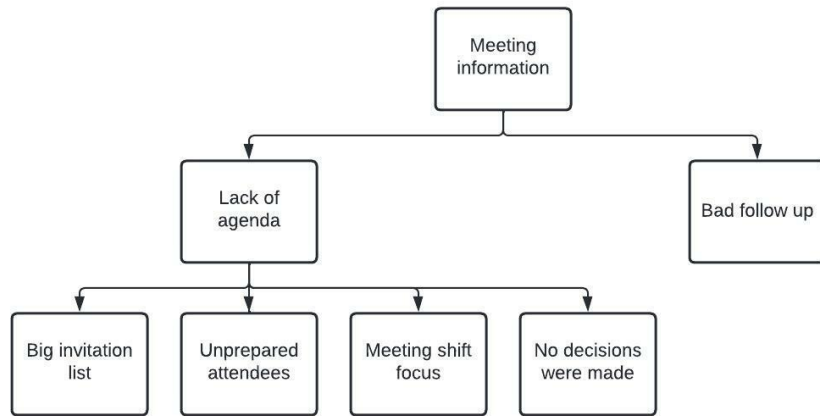
Figure 10: Thematic analysis map

There is one large theme when it comes to the experienced inefficiencies in Lynk & Co's virtual meetings, which is *Meeting information*. The *Meeting information* theme is then broken down into *Lack of agenda* as well as *Bad follow up*. *Lack of agenda* is also causing several follow up issues which were stated through the qualitative answers. These were *Big invitation lists, Unprepared attendees, meeting shift focus,* and *no decisions being made.*

● Meeting Information, the large overall theme regarding meeting issues is that there is a lack of information. This involves both having an agenda and lack of information after the meeting in terms of what will happen next.
  ○ Bad follow up: After a meeting, sending out a brief summary of what the meeting results were, as well as what will happen next is crucial to avoid unnecessary repetition and standstills.
  ○ Lack of agenda: Most of the agendas used in Lynk & Co meetings lack crucial parts of information, such as what in detail will be discussed in the meeting, why all of the different people are needed, what the goal and expected outcome is of the meeting, and what type of meeting it is.
    ■ Big invitation list: In many meetings the invitation list, and therefore the meeting itself tends to become too big. The reason for this can be tied to having a poor agenda. Only having a big picture of what will be discussed will result in the already invited employees inviting even more employees to the meeting as they believe they might be needed. Furthermore, the invitees cannot know for sure if they are needed or not, and will therefore likely attend in case they are needed. The effect this has is that time is wasted due to people attending when they are not needed, it also makes the discussions worse since large meetings become impersonal and leads to attendees being less active.
    ■ Unprepared attendees: Attendees not being prepared creates the need to share basic information before the meeting properly can begin, creating waste for those who already knew the information.

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- Meeting shifts focus: Meetings sometimes shift focus from their original purpose. While the shift creates flexibility, it also leads to the risk of forgetting pressing issues.
- No decisions were made: In many of Lynk & Co's meetings a common issue is that no clear decisions are made. This is mostly caused by key persons or decision makers not attending the meeting, possibly because of the lack of agenda not making it clear why the person was needed.

5.8.2 Before the meeting

The most critical improvement needed to reduce the issues before the meeting is to start using an agenda. Lacking a detailed agenda was by far the most common complaint in the qualitative section. Lacking an agenda was according to the respondents leading to the following issues:

- People are not prepared - See section 4.3.1
- Big invitation list - See section 4.3.1

The other major themes seen through the thematic analysis was that actions after meetings were lacking and that the attendees didn't know why they were invited.

5.8.3 During the meeting

There were three questions regarding the activities during the meeting. There were the usage of cameras, being focused during the meeting (i.e,. not multitasking), and being active in the discussions during the meeting. Most respondents agreed that having the camera turned on improved both the quality of all discussions, as well as made all attendees more active in the discussions. When it came to being focused in the meeting the respondents mentioned that not being focused and instead multitasking during the meeting lowers the quality of the meeting. However, due to the high workload the employees mentioned that they have to multitask in order to have time to do their job. This creates the need for having to repeat subjects when a question is asked to a specific person since he or she was not paying attention due to them multitasking. Regarding activity in the conversation, most respondents answered that they are commonly active during their meetings.

5.8.4 Suggestions for improvement

For the question regarding improvements that could be made within Lynk & Co's virtual meetings, there were two main themes mentioned. These were having a clear agenda as well as more information regarding who does what. With an improved agenda the respondents are not only referring to having information about what will be discussed in the meeting, but also information regarding what type of meeting it will be, what the objective is, as well as a follow up afterwards displaying what is going to happen next.

Other comments regarding how unnecessary meetings could be reduced was for example:

- Use email more frequently - Small questions can easily be answered through email.
- More preparation by management - Make business requirements clear, and make sure that workshops have taken place before discussing requirements with for example the IT department.
- Delegate more work and share information - Currently there is usually one person in each department that sits on a lot of information, and is therefore invited to a lot of meetings. This creates bottlenecks as these persons are hard to get a hold of, which can halt development.
- Keep meetings smaller - large meetings prevent effective discussions.
- Decreasing the number of recurring meetings - recurring meetings tend to get less effective than non-recurring meetings.

6. Analysis

This section presents the analysis of the results from Lynk & Co. The section starts by analyzing the demographic data and Lynk & Co's average Hours in meetings per day and Wasted hours in meetings per day. This is followed by analyzing the likert scale data, the regression models, and the findings from the thematic analysis.

6.1 Demographic data

In this section the analysis of the four different demographic variables will be presented. Gender will be presented first, followed by age group, employee position, and the difference between the departments at Lynk & Co.

6.1.1 Gender

The quantitative results show that there is no indication of a difference in the *Wasted hours in meetings per day* depending on the employee's gender at Lynk & Co. There is minimal to no other previous research regarding this, resulting in limited further analysis.

6.1.2 Age Group

There is an indication that older employees have more meeting hours per day at Lynk & Co. This could be explained by older employees having more responsibility and therefore requiring more meeting hours per day. Additionally, as the employees get older they tend to have less *Wasted hours in meetings per day*. However, the majority of the respondents (91%) as seen in Figure 4.2 in Appendix 4 are between 21-50 years old, spanning over the first three age groups. This potentially indicates that the differences between the younger- and the older age groups are inconclusive and perhaps that there are only minimal differences between age groups at Lynk & Co.

6.1.3 Employee position

The difference in *Hours in meetings per day* between being a manager and not being a manager is partly in accordance with the findings of Rogelberg et al. (2007). Managers at Lynk & Co have 2% more *Hours in meetings per day* compared to the findings of Rogelberg et al. (2007). However, non-manager at Lynk & Co have 175% more *Hours in meetings per day* compared to the findings of Rogelberg et al. (2007). This indicates that non-managers at Lynk & Co perhaps have more *Hours in meetings per day* than necessary. The study Rogelberg et al. (2007) conducted did however not analyze organizations that have solely virtual meetings. This could perhaps explain the large difference between the *Hours in meetings per day* for non-managers, especially as Richter (2020) has found that the frequency of internal meetings increases when an organization goes from physical meetings to virtual meetings.

6.1.4 Department

The quantitative results show that there are both differences between the average *Hours in meetings per day* and the average *Wasted hours in meetings per day* depending on which department the employees are working in. This difference could perhaps be explained by different departments having different functions, for example administrative- supportive-, operational-, or strategic functions. If we analyze the percentage of efficient- and wasted time in the virtual meetings for the different departments we can see that half of the departments (Commerce, Communication, IT, and Operations) believe that 35-40% of every meeting hour is wasted time whereas the other half (Finance, HR, Strategy, and Other) believe that this percentage of waste is 20-30%. This indicates that there are similarities between these two groups. The first half (Commerce, Communication, IT, and Operations) have supportive- and operational functions, while the second half (Finance, HR, Strategy, and Other) have administrative- and strategic functions. This could explain the differences shown in the gathered data, indicating that departments that have supportive- or operational functions have more inefficiencies in their virtual meetings at Lynk & Co.

6.2 Hours in meetings per day and wasted hours in meetings per day

The average employee at Lynk & Co spends 3,64 *Hours in meetings per day*. This results in the average employee at Lynk & Co having 82% more *Hours in meetings per day* compared to the findings of Rogelberg et al. (2007). Additionally, the average Lynk & Co employee works eight hours a day, which results in the average Lynk & Co spending 45,5% of their workday in virtual meetings. This indicates that the average employee at Lynk & Co perhaps has more *Hours in meetings per day* than necessary.

The average employee at Lynk & Co believes that they waste 1,28 hours per day in virtual meetings. This translates to an average Lynk & Co employee wasting 35,2% of every meeting hour. This percentage point is lower than the result from the study conducted by Rogelberg et al. (2007) which found that roughly 50% of the meetings conducted were rated as poorly executed by the attendees. However, meetings that are poorly executed and meetings that have a high percentage of wasted time are perhaps not synonymous with each other, which might explain the 14,8 percentage point difference between the findings at Lynk & Co. Additionally, the average Lynk & Co employee works eight hours per day, which results in the average Lynk & Co employee wasting 16% of their workday in virtual meetings. This indicates that the average employee at Lynk & Co perhaps has an unhealthy number of *Wasted hours in meetings per day* and that efficiencies can be made.

6.3 Likert scale data

This section presents the analysis of the likert scale results from the survey. The standalone likert scale questions regarding if there are more meetings than necessary at Lynk & Co and the quality index is presented first. This is followed by selected likert scale answers in the four different constructs.

6.3.1 Standalone likert scale questions

The likert scale question *There are more meetings than necessary* and the *Meeting quality index* are interesting to further analyze. This is partly due to the likert scale question *There are more meetings than necessary* having a higher average answer than the *Meeting quality index* (4,85 respectively 4,5). Spending resources to conduct meetings are according to Rogelberg et al. (2007) often not worth it as there is usually large inefficiencies in meetings. This finding from Rogelberg et al. (2007) is in accordance with the finding that Lynk & Co employees agree that there are more meetings than necessary at Lynk & Co. Additionally, poorly executed meetings can according to Allen et al. (2007) have a direct negative impact on the employees perception of their workplace and well-being. As Lynk & Co employees agree that there are more meetings than necessary and at the same time answer an average of 4,5 regarding the quality of the virtual meetings it could be an indication that the unnecessary meetings have a direct negative impact on the employees perception of the workplace, similar to the findings of Allen et al. (2007).

6.3.2 Constructs

The likert scale answers from the four constructs being selected for further analysis are the answers that are on the wrong side of the neutral point (four), i.e., if the answer should be maximized the answers that are below the neutral point (four) are further analyzed. Additionally, some statements under *Construct 3* and *Construct 4* were further analyzed even though they were on the correct side of the center point. The reason why they were analyzed was because of their near proximity to the neutral point and since e.g., answer of 4,4 relating to the employees focus during the virtual meetings was seen as poor. Furthermore, *C2 (I know why I am called to the meeting)*, was also analyzed due to the direct connection between it and *C2 (There is a clear agenda regarding the topics that will be discussed during the meeting)*.

C1 - Meeting attendees was not well prepared - Originates from *Planning*. It is crucial that all attendees are prepared for the meeting to make it run smoothly. Not preparing is related to bad planning, but it is not always the fault of the attendees if they do not prepare enough. Lehmann (2003), Allen et al. (2015), Bagire et al. (2015), and Oeppen et al. (2020) states that sending out a meeting agenda is critical to allow everyone to prepare for the meeting. Since it has become apparent that a clear agenda often is missing within Lynk & Co's meetings it is a strong possibility that the lack of preparation by attendees comes as a result of a poor agenda, hindering the attendees to know how they should prepare for the meeting.

C1 - Meeting could have been replaced with an email - Originates from *Communication*. The two main communication channels in a virtual company are virtual meetings and email. According to the employees at Lynk & Co, meetings can more than half of the times be replaced with an email. This is especially when the meeting is purely informative. This is in accordance with Lehmann (2003) that suggests that meetings should be used when the topic becomes more complex and requires problem solving. This indicates that email would be more efficient than a virtual meeting if the content is informational and less complex.

However, a drawback is that if a meeting is replaced with a longer email, there will be no room for immediate discussions and questions.

C1 (Employees with the same knowledge attended the meeting) - Originates from *Planning*. This could be an effect of the *scaling* phase of a startup, where Picken (2017) mentions that when a startup is growing fast, more formal and structured communication processes are needed to mitigate the ineffective meetings. Considering the rapid growth Lynk & Co has seen they are at the moment in the scaling phase. However, the current communication process at Lynk & Co have not changed since they were in the early stages of the startup, which could be one cause of the ineffective meetings at Lynk & Co. According to Bagire et al. (2015) structured communication processes can be achieved with meeting policies where they highlight the importance of a meeting purpose and meeting agenda. When there does not exist a strong agenda when calling for a meeting, it is difficult to know who needs to attend a certain meeting. When several people from the same team are invited to attend a meeting, they could decide internally who should attend the meeting as long as they know the meeting purpose. This could also be solved through better planning from the meeting caller, making it so only one person from each team is invited to begin with.

C2 (There is a clear agenda regarding the topics that will be discussed during the meeting) - Originates from *Planning*. Like Lehmann (2003), Allen et al. (2015), Bagire et al. (2015), and Oeppen et al. (2020) states, planning is important to succeed in a meeting, and the agenda is the core of planning. Without solving this issue, the risk of additional issues appears.

C2 (I know why I am called to the meeting) - Originates from *Planning*. Knowing why you are called to a meeting is crucial, both to know if your attendance is needed, and to be able to prepare for the meeting. According to the respondents this is supposed to be cleared up in the agenda, which is in line with what Lehmann (2003), Allen et al. (2015), Bagire et al. (2015), and Oeppen et al. (2020) states regarding the reason for using agendas.

C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask)) - Originates from *Focus*. As stated by Lehmann (2003), Wang et al. (2021) and Kuzminykh and Rintel (2020), virtual meetings are not monitored in the same way as physical meetings are, which makes it easier for attendees to start working on something else, or picking up their phone to look through social media. The quantitative answers indicate that the average focus in a meeting is very low and multitasking is happening frequently. This is according to Kuzminykh and Rintel (2020) related to the use of a video camera, where participants not using the camera are more likely to start doing something else instead of focusing on the meeting. However, the results show that the employees at Lynk & Co are using their camera to a high extent, indicating that the lack of focus is perhaps affected by something else. Since many employees state that they are wrongfully invited to many meetings, it is likely that they start multitasking and zone out during those instances, resulting in a decreased focus and engagement.

C4 (I send a detailed agenda with my meeting invites) - Originates from *Planning*. The employee response regarding their own effort when it comes to sending out detailed agendas is also low, but still 11,3% higher than what they believe of others' effort. This shows that most employees are aware of the bad job they do when it comes to sending out agendas, and

therefore knows that there is plenty of room for improvement.

6.4 Regression models

In this section the analysis of two multiple regression models conducted will be presented. Both models had *Wasted hours in meetings per day* as the dependent variable. The first regression model had *Hours in meetings per day* and the four constructs as independent variables. The second regression model was used to further analyze how the single items (Likert scale questions) in each construct affect the dependent variable. The variables taken into account in the second regression model were those that resulted as significant from the previous regression model.

6.4.1 Multiple regression model one

The first regression model shows that the following variables has a statistically significant effect on the *Wasted hours in meetings per day* and will be further analyzed below:

- *Hours in meetings per day*
- *Construct 1*
- *Construct 3*

Hours in meetings per day showing a significant effect translates to Lynk & Co employees experiencing more *Wasted hours in meetings per day* if *Hours in meetings per day* increases. This is in accordance with Galanti et al. (2020), Wang et al. (2021), and Toscano and Zappalà (2020) which suggest that an increase in virtual meeting hours is often seen as unnecessary or wasteful by the employees as it disturbs them from working towards executing their work responsibilities. However, Allen et al. (2015) mentions that it is important to be able to have meetings inside an organization to share information, solve problems and make decisions, develop and implement organizational strategy, and debrief teams on their performance. This is further highlighted by Picken (2017) which mentions that Startups in particular must have meetings to further grow and take market shares as a newly started company. However, they also mention that as the startup matures the internal communication must follow a stricter guideline to make the organization more efficient. This could indicate that there is a fine line between too many meetings, potentially resulting in meeting inefficiencies and too few meetings, potentially resulting in organizational inefficiencies.

Construct 1 showing a significant effect is in accordance with the majority of the authors mentioned in Table 2 in *3.4.1 Virtual meeting challenges*. The construct's items (likert scale questions) are based upon problems mentioned in Table 2 combined with earlier observed problems expressed by employees within Lynk & Co. *Construct 1* being statistically significant indicates that either some or all of the stated problems in the construct are present at Lynk & Co.

Construct 3 showing a statistically significant effect is in accordance with Oeppen et al. (2020), Rubinger et al. (2020), Kuzminykh and Rintel (2020), Lehmann (2003), Galanti et al. (2021), and Wang et al. (2021) which all highlight that focus and engagement is an important factor as the attendees have a harder time focusing on the the things being discussed in a virtual meeting in comparison to a physical meeting. *Construct 3* being statistically significant indicates that either some or all of the statements in the construct affect the wasted time in meetings at Lynk & Co.

C*onstruct 2* and *Construct 4* had no statistical significant effect on the *Wasted hours in meetings per day*. This is not in accordance with Oeppen et al. (2020), Lehmann (2003), and Kuzminykh and Rintel (2020) which suggests that adequate planning before the meeting results in the meeting becoming more valuable for the attendees. Additionally, this is not in accordance with *Construct 1* being statistically significant as *Construct 1* has underlying items (likert scale questions) which are based upon activities before the meeting. This could perhaps be explained by the fact that *Construct 1* has six underlying Likert scale questions, potentially resulting in some items affecting *Construct 1* and its significant effect more than the other.

6.4.2 Multiple regression model two

The second regression model shows that the following variables has a statistically significant effect on the *Wasted hours in meetings per day* and will be further analyzed below:

- *Hours in meetings per day*
- *C1 (Key persons did not attend the meeting)*
- *C1 (Meeting could have been replaced with an email)*
- *C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))*
- *C3 (I am active in the conversations during the meeting)*

Hours in meetings per day showing a significant effect have been addressed above in the first regression model, same analysis applies here.

C1 (Key persons did not attend the meeting) showing a statistically significant means that key persons not showing up in a virtual meeting results in a lower *Wasted hours in meetings per day*. This is not in accordance with Allen et al. (2015 that suggests that making decisions and solving problems are some of the main meeting purposes that adds value to the meeting. However, if decision makers have failed to attend meetings at Lynk & Co the meetings have often gotten canceled and rescheduled at a later date (A, Genberg, personal communication, 3 May, 2022) This could explain the employees perception that *Wasted hours in meetings per day* decreases in the short term. Key persons are not attending the meeting, resulting in the meeting being canceled and rescheduled at a later time, freeing up working hours for the employees, yielding a perception of less *Wasted hours in meetings per day*.

C1 (Meeting could have been replaced with an email) showing a statistically significant effect on the *Wasted hours in meetings per day* shows that there are meetings being held that are purely sharing information. This indicates that Lynk & Co potentially have too many informative meetings, resulting in them impacting the employees *Wasted hours in meetings per day*. However, according to Allen et al. (2015) meetings within a company are critical where the sharing of information is one out of four major reasons to conduct a meeting, which is in somewhat of a disagreement with this finding. Email is a great tool to quickly and effectively share information, however according to Lehmann (2003) it is not a great tool when the topic becomes more complex and requires problem solving or decision making. If that happens, meetings become more effective as multiple communication channels are used (Lehmann, 2003). This shows that meetings should be used when the topic becomes more complex, requires problem solving, or requires decision making rather than using meetings for information sharing purposes in order to decrease the *Wasted hours in meetings per day*.

C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask)) showing a statistically significant effect on the *Wasted hours in meetings per day* shows that if the employee is focused during the meeting, the *Wasted hours in meetings per day* will decrease. According to Rubinger et al. (2020), Kuzminykh and Rintel (2020), and Wang et al. (2021) maintaining focus during virtual meetings is hard as the attendees are not as monitored as in physical meetings. This makes it easier for the attendees to start working on something else, potentially yielding a perception of the meeting being of little- to no value. According to Oeppen et al. (2020), Lehmann (2003), and Kuzminykh and Rintel (2020) this becomes an even larger problem if the planning before the meeting is insufficient as this can cause attendees to join the virtual meeting even though they were not needed there. Richter (2020) further expands on this problem and mentions that virtual meetings are both easier to set up and join, which results in attendees joining virtual meetings more frequently in comparison to physical meetings. Additionally, Allen et al. (2012) mentions that the participants focus is affected by the meeting objectives in the meeting invitation. The poorly executed planning before the meeting could therefore potentially cause the lack of focus during virtual meetings even though the model states that *Construct 2* has an insignificant effect on the *Wasted hours in meetings per day*. This is further supported by the response from the statement *C2 (I know why I am called to the meeting)* with an average answer of 4,79. This could indicate that the employees are not focused simply because they do not know why they are there in the first place.

C3 (I am active in the conversations during the meeting) showing a statistically significant effect on the *Wasted hours in meetings per day* shows that the employees believe that not being actively involved in the meeting increases their *Wasted hours in meetings per day*. This is similar to the previous variables: *C1 (Meeting could have been replaced with an email)* and *C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))*. Usually, Informative meetings do not require the attendees to be actively engaged, indicating that Lynk & Co potentially have too many informative meetings. Focusing on the meeting and being actively involved in the meeting have according to Rubinger et al. (2020), Kuzminykh and Rintel (2020), and Wang et al. (2021) both similar

root causes, which is often rooted in the employees being able to e.g., work on another assignment or answer emails during the meeting. This combined with the ease of joining a virtual meeting (Richter, 2020), and potential lack of information before the meeting (Oeppen et al., 2020; Lehmann, 2003; Kuzminykh & Rintel, 2020) could result in employees joining an irrelevant meeting, resulting in them not being active in the discussions and therefore increasing *Wasted hours in meetings per day*.

6.5 Thematic analysis

From the thematic analysis it was found that several employees from several different departments agree that one of the biggest issues is that there usually is not an agenda attached in the meeting invitation, and if there is one it is usually an inadequate one. Oeppen et al. (2020) and Lehmann (2003) both agree that adequate planning is crucial when it comes to having virtual meetings. This is further supported by Allen et al. (2015), Bagire et al. (2015), and Allen et al. (2012) which mention that planning, clearly stated meeting purposes, and agendas are of most importance when conducting any meeting. The complaints that poor planning affects meeting efficiency is therefore confirmed both by the scientific literature as well as by the employees at Lynk & Co, showing a need for improvement. Not having a clear agenda is a possible explanation for several of the other issues identified. Table 22 visualizes some of the issues identified in the thematic analysis together with an explanation of how the issue could be caused by the lack of agenda, according to the respondents.

Table 22: Issues identified in the thematic analysis and their potential cause

Issue	Cause
People are not prepared	Without a clear agenda, knowing how to prepare is difficult.
No decisions were made due to decision makers not attending	Decision makers are usually managers who are called to many meetings. An agenda that does not clearly state what the goal of the current meeting is will make the decision makers unsure what meeting to attend, and might therefore skip a meeting where they were needed to make a decision.
Meetings shift focus	Without a clear agenda with previously decided decision points to follow, everyone attending will get their own interpretation of what the meeting will focus on and therefore also have different opinions on what to discuss, hence the risk for meetings shifting focus.
Big invitation list	The big invitation list happens not only because the meeting caller sends invites to many employees, but also because the employees that are invited to the meeting forward the meeting to additional employees. A possible explanation for the mass-forwarding of meetings could be that due to the loosely formulated agenda, invitees want to have more people there that from the larger picture of the discussion might find it relevant, but in reality does not.

Keeping focus during virtual meetings is more difficult than what it would be in a physical meeting due to the fact that the attendees can multitask, watch videos, and even sit with their phone without anyone noticing (Rubinger et al. 2020; Oeppen et al., 2020; Kuzminykh & Rintel 2020). Focus in virtual meetings are according to Kuzminykh and Rintel (2020) affected by the use of a video camera. However, employees at Lynk & Co tend to use their video cameras frequently, indicating that there are other reasons that affect their focus in the virtual meetings. The employees mentioned that the main reason for the lack of focus in their virtual meetings are that the meetings are too large, meetings are not relevant to their work responsibilities, and the need for multitasking. The number of attendees being too high and that some meetings are not relevant to their work responsibilities is according to the respondents related to the employees not having a clear view on who does what. These problems are also connected to the lack of an agenda, where employees state that they do not know if they can skip a particular meeting or not as a result of poorly communicated information regarding the meeting purpose. Lack of an agenda resulting in a decrease of the participants' focus is supported by Oeppen et al. (2020), Lehmann (2003), and Kuzminykh and Rintel (2020). Regarding multitasking, as seen through the thematic analysis, plenty of employees are multitasking during meetings. Employees mentioned that this is because of them not being able to know if they should join a particular meeting or not as the agendas often are missing or are poorly executed. However, they also mentioned that they have to multitask due to being overloaded. This is in line with the findings of Oliva and Kotabe

(2019) that have found that internal meetings are a challenge for startups as it often lacks resources, making it difficult to share knowledge within the organization. Reducing time in meetings, and particularly wasted time in meetings should therefore give employees more time to do actual work, reduce their work overload and remove the need to multitask.

7. Discussion

This section presents the discussion of the master thesis project and its results. The section starts by discussing the quantitative- and qualitative results. This is followed by a discussion regarding the generalizability of the findings, the choice of methodology and limitations and future research.

7.1 Quantitative results

This section presents the discussion regarding the four main purposes of the master thesis project. If non-value-added time exists is presented first, followed by where non-value-added time exists, why non-value-added time exists and potential solutions to minimize the non-value-added time.

    a.   *Identify if non-value-added time in the virtual meetings exists*

Overall, the meetings at Lynk & Co have shown to be in need of improvements. The employee's perception is that there are 1,28 *Wasted hours in meetings per day*. This translates to 35,2% of the total time in meetings per day being wasted and 16% of their workday being wasted, where they would rather work on their assignments instead of being in a virtual meeting. This is not cost-efficient and can result in long-term devastating economical effects. Additionally, the average employee partly agrees (4,85 on a 1-7 point scale) that there are more meetings than necessary at Lynk & Co, indicating that a change is needed. Furthermore, almost all answers from the likert scale questions were between 3-5 on the 1-7 scale. For other surveys, a four would usually be an acceptable answer, but having a result of 4,79 on *C2 (I know why I am called to the meeting)* is in this case considered to be low since an attendee always should be certain of why they are being invited to join a specific meeting. Having averages being this low on a question that should be higher shows that there is much room for improvement. Only dealing with the most critical questions as being done in this master thesis project is a start for how to improve the virtual meetings at Lynk & Co. However, only improving the most critical questions will not necessarily automatically make Lynk & Co's virtual meetings great, but it is a starting point for reaching that goal.

    b.   *Identify where the non-value-added time exists (E.g., if potential differences between departments exists)*

There is nothing that suggests that there is a difference in *Wasted hours in meetings per day* depending on if you are a male or a female.

There were indications of differences between the age groups at Lynk & Co. However, since only 9% of the respondents were in the two older age groups we cannot say for certain that this finding is a fact as it also could be attributed by chance alone. Therefore, there is no strong evidence that there are differences in *Wasted hours in meetings per day* depending on the employee's age at Lynk & Co.

There is a noticeable difference in the *Wasted hours in meetings per day* depending on if you are a manager or not, where managers believe that there are more *Wasted hours in meetings per day* in comparison to employees that are not managers. The difference between managers and non-managers is not shocking. Managers often get invited to more meetings than non-managers since they have larger areas of responsibility. Managers are also often the decision makers in most situations, most likely resulting in them having to attend more meetings than non-managers. Managers have the most *Wasted hours in meetings per day*, are often the decision makers within the virtual meetings, and are also often the most influential employees within the organization. The managers have the power to successfully drive the changes needed to reduce the non-value-added time in Lynk & Co's virtual meetings. Therefore, we believe that the managers are the ones that perhaps should have the majority of the responsibility to implement the recommendations (See sections *8.2 recommendation* one and *8.3 Recommendation two*). Giving the responsibility to the managers could also positively affect the organizational culture, where having engaged and driven managers or leaders often help drive organizational change (By, 2005).

The *Wasted hours in meetings per day* appear to be apparent throughout the entire company. All departments have a relatively high fraction of waste, although some departments have more than others. The Finance-, HR-, Strategy- and Other departments have a lower percentage of waste than the Commerce-, Communication-, IT-, and Operations departments. This finding could potentially be used when implementing the recommendations (See sections *8.2 recommendation* one and *8.3 Recommendation two*). For example, implementing the recommendations in the departments with the highest percentage of waste could potentially result in a reduced implementation risk as it is confined within a specific population and not the whole organization. Implementing the recommendations in the departments with the highest percentage of waste could also increase the effect of the recommendations themselves.

  c. *Identify why the non-value-added time exists and identify potential solutions to minimize the non-value-added time*

The regression model shows that there are five variables that affect the non-value-added time in Lynk & Co's virtual meetings:

- *Hours in meetings per day* - It is obvious that *Hours in meetings per day* has a significant effect on the non-value-added time. The wasted time grows almost linearly together with the total time in meetings. This indicates that the waste happens not only by attendees being wrongfully invited to meetings, but also by the meetings themselves being inefficient and in need of improvements. Therefore, focus must be laid on not only removing meetings, but also to make the current meetings more efficient.
- *C1* (Key persons did not attend the meeting) - In contrast to what would be expected, the expected waste in meetings decreases if key persons do not attend. An explanation

for this could be that if key persons do not attend, the meeting will be canceled and there cannot be any wasted time in a meeting if there is no meeting present. However, when a meeting is canceled due to key persons not attending, the meeting could often be canceled during the meeting, resulting in the attendees joining the meeting without getting any valuable information from it. This would, by the master thesis projects definition, lead to increased *Wasted hours in meetings per day*. Therefore, we believe that the respondents might have failed to acknowledge that a canceled meeting would most likely have to be rescheduled at a later date. A rescheduled meeting would then result in the employees joining two meetings instead of one, potentially increasing the actual *Wasted hours in meetings per day*, instead of decreasing it.

- *C1* (Meeting could have been replaced with an email) - As stated by many respondents, a meeting could often have been replaced with an email. This is especially true when the meeting primarily revolves around a small issue, or where the meeting ended up to be purely informational. If a meeting is able to be fully replaced by an email, a lot of time could be saved. There are however risks associated with only using email. Using email to ask questions and discuss matters is often harder than conducting a meeting to address the same topic, which perhaps could lead to misunderstandings. The employees receiving the email might also ignore or postpone answering the email if they do not deem it important.

- *C3* (I am fully focused on the things being said during the meeting (For example, I do not multitask)) - Being focused in the meeting was shown to reduce the wasted time in meetings per day. However, we believe that this might go the other way around. If a meeting is relevant for the attendee, the attendee will focus on the meeting. For this reason, if the meeting is irrelevant to the attendee, keeping your focus during the meeting might not reduce the waste as the regression model suggests. This is similar to the findings and suggestions of previous scholars, where insufficient planning could be the root cause of both lowered focus in virtual meetings and being in an irrelevant virtual meeting (Kuzminykh & Rintel, 2020; Oeppen et al., 2020; Allen et al. 2012).

- *C3* (I am active in the conversations during the meeting) - This is connected to "The meeting could have been replaced with an email" and "Focusing on the meeting". There is little to no value added activities being executed if the meeting is purely informational and if the attendees are dormant in the meeting. If the meeting is irrelevant, the attendee will most likely not be active in the conversation. Hence, being active in the discussion during an irrelevant meeting will most likely not reduce the *Wasted hours in meetings per day*. This is also similar to the findings and suggestions of previous scholars, where being active in the virtual meeting is connected to meeting planning (Oeppen et al., 2020; Allen et al. 2012). Similar root causes were also mentioned in the qualitative results.

7.2 Qualitative results

The qualitative results showed that the main reasons for waste are pointing towards the lack of a clear agenda. A good agenda is supposed to inform all attendees about what will be discussed, why it must be discussed, what is needed from each team/department, what type of meeting it is, and what the expected goal of the meeting is. Based on the responses, several issues would be solved through the use of a clear agenda. Two big issues found was that meeting attendees were not prepared, and that employees with the same knowledge attended the meetings. If there is no agenda, how can attendees possibly prepare for the meeting without knowing in detail what will be discussed? Regarding multiple attendees with similar knowledge, having an agenda informing everyone what will be discussed will allow each team to decide if several people really are needed, or if it will be sufficient with only one. From this a potential conclusion can be drawn that even though planning according to the quantitative data did not have a statistically significant impact on the *Wasted hours in meetings per day*, the qualitative data and previous scholars says something else. This indicates that better planning and the usage of an agenda is of great importance and are most likely the root cause of the *Wasted hours in meetings per day* at Lynk & Co. The following issues are themes that identified as having lack of agenda as their root cause:

- People are not prepared
- No decisions were made due to decision makers not attending
- Meetings shift focus
- Big invitation lists

Because of the large number of respondents that agreed with these themes there is a strong indication that having good agendas is of great importance for a meeting to be efficient. Another topic within the qualitative answers tied to meeting information was that there was no, or bad follow up after the meeting. This led to attendees having to re-do the same work several times due to poor documentation and follow up. One major advantage of these two findings is that implementing the usage of good agendas together with documentation of the follow up is something that is very easy to do.

7.3 Generalizability

There are two main topics regarding the generalizability of this master thesis. The first one is the generalizability regarding if the findings of this master thesis are applicable to the entire Lynk & Co organization. The second is the generalizability regarding if the findings of this master thesis are applicable to other organizations other than Lynk & Co. These two will be presented below.

The data collection method used was a company-wide survey which was sent out to 718 Lynk & Co employees. It was not sent out to all Lynk & Co employees as the questions in the survey were not related to their work responsibilities i.e., the employees that do not have internal virtual meetings in their average workday. This results in the findings of the master

thesis to only be applicable to the employees that have internal virtual meetings in their average regular workday at Lynk & Co. 143 of the 718 employees answered the survey, resulting in a response rate of 19,9%. This is according to Krejcie and Morgan (1970) relatively low where they suggest that a population size of 718 would need at least 312 respondents to be able to generalize the results to the target population, which is a response rate of 43,4%. However, according to Dillman (2011) a response rate of 35% could be efficient to generalize the findings to the target population if the respondents were randomly selected. The respondents for this master thesis are seen as being randomly selected as the survey was sent out via email, which resulted in a demographic variety in genders, age groups, employee positions, and departments. With this, the results can still not be seen as generalizable because of the response rate of 20%. However, since there are strong patterns regarding the problems and potential solutions across the population that did answer the survey, it is our opinion that the findings can be generalized to the target population to some extent. For example, the majority of the respondents agreed that Lynk & Co's virtual meetings are in need of improvements, and that this can be solved with an increased usage of agendas and meeting follow-ups. However, to be absolutely certain regarding the generalizability of the target population a future research report that sets a target for a higher response rate should be conducted.

The generalizability of the findings from a case study are often limited (Yin, 2009). However, findings from a specific case study might be generalizable to similar organizations (Donmoyer, 2000). Therefore, chances are that the findings and the recommendations from this master thesis might be of value to similar organizations that are going through the transition from physical- to virtual meetings. Additionally, the questions from the survey were based on expressed problems with the virtual meetings from some employees at Lynk & Co as well as previous research identifying problems with virtual meetings, where none of the previous studies focused on rapidly growing startups. Both the expressed problems at Lynk & Co and the identified problems from previous research were found to be actual problems at Lynk & Co. This could be an indication that the findings from this master thesis project can be generalized to not only fast growing startup companies but also other companies that go through the transition from physical- to virtual meetings. However, as this master thesis handles non-value-added time in virtual meetings - a topic that is highly subjective, we cannot say for certain that the findings are generalizable to other organizations and should therefore perhaps be a topic for future research.

7.4 Choice of methodology

The survey provided the majority of the empirical data used in the master thesis project. The survey had both qualitative- and quantitative questions and resulted in a large number of data points. The initial choice of methodology was to conduct personal interviews after the survey, however as the majority of the respondents already had made their voice heard by answering qualitative questions, personal interviews were not pursued. This combined with the time restrictions of the master thesis resulted in the survey being the main method for gathering

primary data, which led to two main analysis methods: Multiple regression analysis and thematic analysis.

Multiple regression analysis and thematic analysis made it possible to find variables that have a statistically significant effect on the dependent variable. It also helped finding the root cause of these variables together with a thematic analysis and secondary data in the form of previous research. However, gathering additional data from personal interviews or focus groups could have resulted in a more in-depth understanding of the problems at Lynk & Co, potentially resulting in better recommendations. The authors of the master thesis have acknowledged this and would have proceeded with personal interviews and focus groups if the master thesis project were to be conducted once more.

When conducting a master thesis project within social sciences i.e., gathering data from the perception and interpretations of humans, the answers can become highly subjective. For example, one employee's perception of the *Wasted hours in meetings per day* can differ from one of their co-workers. This could result in the findings being less generalizable to the total population. However, this was mitigated by giving both examples and definitions in the survey questions. This combined with the respondents having similar responses further led us to believe that the findings may be generalizable even though there is potential subjectivity embedded in the data.

Lastly, after the survey was finalized and sent out we gained further insight into effective meetings and wished to have added questions to the survey e.g., the question "At what time of day are you most productive?". This to find where employees are most productive to perhaps be able to recommend Lynk & Co to not schedule meetings during that particular time. However, developing a recommendation with this information could perhaps be difficult as it also is a highly subjective question.

7.5 Limitations and future research

There were several limitations within the master thesis project conducted at Lynk & Co. For example, due to limiting this research to a single company, a limited number of respondents could answer the survey. Furthermore, all companies are different, and the results and recommendations created for Lynk & Co might therefore not hold true in other companies since aspects such as culture and way of working can make the issues greatly differ. Additionally, this master thesis highlights a topic that could be highly subjective, resulting in the possibility of the findings not being highly generalizable to other organizations. The generalizability to other organizations could perhaps have been achieved if this master thesis project had benchmarked Lynk & Co to another organization. However, as we had limited time during this master thesis project we solely focused on Lynk & Co. Therefore it would be interesting to conduct a future project at a different organization to see if the findings in this master thesis holds true or if additional problems and recommendations arise.

An additional limitation of the master thesis project is connected to one of the authors. One author of the master thesis currently works part time at Lynk & Co, and has been for the last 10 months. This could have resulted in the master thesis author creating a bias towards the meeting issues. When working at a company, and seeing a big issue present at that company there could be a risk of the employee assuming that everyone experiences the same issue. However, being aware of this potential bias before starting the master thesis project and counteracting potentially reduces the risk of the bias having a significant impact.

For future research it would be interesting to re-do the same master thesis project at Lynk & Co after the recommendations have been implemented in order to see what improvements have been made regarding the *Wasted hours in meetings per day*. It is only through this that the real proof can be found, whether the suggested improvements actually worked or not. It is also only through re-doing the same research several times that true optimization of meeting time can be achieved.

8. Conclusions and recommendations

This section highlights the concluding remarks and the recommendations for Lynk & Co related to the aims and objectives set out in the beginning of this master thesis. The conclusions will be presented first followed by two recommendations to Lynk & Co.

8.1 Conclusions

It is hard to generalize the findings of employees' perception of their *Wasted hours in meetings per day*. The variable is very subjective which could mean that one employee's perception of *Wasted hours in meetings per day* is different from their co-workers. Despite this, we would say that the data gathered are compelling enough to draw conclusions about the problems regarding the virtual meetings at Lynk & Co and potential recommendations that could reduce the non-value-added time in their virtual meetings.

There is no denying that Lynk & Co have problems regarding their virtual meetings. On average there is 35,2% wasted time in every virtual meeting, this translates into employees wasting 16% of their 8 hour workday. There are no indications that there are differences in *Wasted hours in meetings per day* between gender or age groups. However, there are noticeable differences between employee positions and departments, which can help Lynk & Co to know who should drive the suggested recommendations, and where it should be implemented first.

The quantitative and qualitative results show that many of the common problems regarding the virtual meetings at Lynk & Co are connected to inadequate meeting planning and communication. Agendas are not widely used at Lynk & Co, resulting in attendees with similar knowledge attending the meeting, attendees not knowing why they were invited to the meeting, attendees not being prepared for the meeting, meeting shifting focus, and meeting attendees failing to do a follow-up after the meeting. This caused employees to attend irrelevant meetings, increasing their total number of *Hours in meetings per day* and decreasing both their focus and their activity in the meetings as well as after the meetings. Thus we conclude that there are two main root causes of the non-value-added time in virtual meetings at Lynk & Co:

- Inadequate meeting information, where the majority of the virtual meetings at Lynk & Co fail to have an agenda and a meeting follow-up
- Inadequate information regarding the work responsibilities of Lynk & Co employees

This resulted in two recommendations for reducing the non-value-added time in virtual meetings at Lynk & Co. These two recommendations are presented in the upcoming sections.

8.2 Recommendation one

One major problem is the lack of planning before the virtual meetings at Lynk & Co, therefore a recommendation regarding an internal policy for creating and inviting employees to virtual meetings is recommended. This recommendation is supported by Picken (2017) who states that when a startup is in the phase of scaling up the organization there must be stricter communication processes as previous informal communication processes result in organizational inefficiencies. This policy would include, but not be limited to (1) always providing an agenda that highlights which type of meeting it is, the main purpose(s) of the meeting, as well as timestamps and responsibility delegation for every item in the agenda, (2) follow up mail after the meeting which summarizes the findings and further actions to both document the meeting as well as providing a future roadmap, (3) minimizing the number of employees from the same departments and teams in cross-functional meetings. A recommendation for how Lynk & Co's meeting policy can be designed is seen in Appendix 7.

8.3 Recommendation two

As Lynk & Co are a fast growing startup that almost exclusively work virtually there are problems regarding not knowing which employees to invite to the meetings. All employees have a note next in their Microsoft account stating what department they work in, and what their title is. These titles do however not give any detailed information regarding what a person practically works with. For this reason our second recommendation is to incorporate more detailed information regarding each employee's tasks within their Microsoft profile. The implementation of this recommendation would potentially give two effects:

- Employees can now see what their colleagues are working with, and make it easier for them to only invite the correct people to a meeting
- Onboarding will be quicker as they can see who works on what right away, instead of having to ask

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Appendices

Appendix I - The final survey

Meeting evaluation

This survey is the basis of an ongoing master thesis report which sets out to reduce non-value added time in the meetings at Lynk & Co.

All answers are anonymous where individual answers will not be analyzed by themselves. Please make sure to answer all questions with full honesty and transparency.

* Obligatoriskt

1. What is your gender? *

- ◯ Man

- ◯ Woman

- ◯ Non-binary

- ◯ Prefer not to say

2. How old are you? *

- ◯ 20 or below

- ◯ 21-30

- ◯ 31-40

- ◯ 41-50

- ◯ 51-60

- ◯ 61-70+

- ◯ Prefer not to say

3. Are you a manager for other employees? *

○ Yes

○ No

4. In what department/team do you work? *

○ Communication (Marketing operations, Creative)

○ Commerce (Sales, Engagement, Car sharing)

○ Operation (Retail, Uptime, Last mile, Service, Aftersales)

○ Finance

○ IT (Sales & Retail platform, Web, CEP, OTD...)

○ Strategy, Product & Brand (Offer, Vehicle management, Connectivity)

○ Legal

○ HR

○ [   ]

Annat

5. Meeting frequency *

	Strongly disagree	Disagree	Partly disagree	Neutral	Partly agree	Agree	Strongly agree
There are more meetings than necessary at Lynk & Co	○	○	○	○	○	○	○

6. On average, how many hours per day do you spend in a meeting? *

[   ]

Värdet måste vara ett tal

7. On average, how many of these daily meeting hours do you see as a waste of your time? Due to for example: You were not needed, the meeting could have been handled through email, other coworkers with the same knowledge as you were already there, the meeting caller was not prepared, etc. *

Värdet måste vara ett tal

8. The following questions regards possible reasons for waste of time. Please rate each question on a scale 1-7 based on how frequent the issue appears. Multiple answers can have the same choice. *

	Never	Very rarely	Rarely	Sometimes	Often	Very often	Always
The person who called for the meeting was not well prepared	○	○	○	○	○	○	○
People other than the meeting caller was not well prepared for the meeting	○	○	○	○	○	○	○
The information given in the meeting was not relevant to me	○	○	○	○	○	○	○
Other key persons did not attend, which prevented the meeting from getting the intended results	○	○	○	○	○	○	○
The meeting could have been replaced with an email	○	○	○	○	○	○	○
Other coworkers with the same knowledge as me attended the meeting	○	○	○	○	○	○	○

9. If any other reason, please specify the reason and its rating

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10. Before-meeting questions *

	Never	Very rarely	Rarely	Sometimes	Often	Very often	Always
I know what the meeting will focus on	○	○	○	○	○	○	○
There is a clear agenda regarding all topics that will be discussed during the meeting	○	○	○	○	○	○	○
I know exactly why I am called to the meeting	○	○	○	○	○	○	○

11. If one of the above "Before-meeting questions" were rated low, is this something bothering you, and that in you opinion affects meeting efficiency? If yes, please elaborate why and give an example.

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12. In-meeting questions *

	Never	Very rarely	Rarely	Sometimes	Often	Very often	Always
I am fully focused on the things being said during the meeting (For example, I do not multitask)	○	○	○	○	○	○	○
I have my camera turned on during the meeting	○	○	○	○	○	○	○
I am active in the conversations during the meeting	○	○	○	○	○	○	○

13. If one of the above "In-meeting questions" were rated low, is this something you think affect the meeting quality? If yes, please elaborate why and give an example

14. In your own opinion, what could be done to prevent the wasting of your time through unproductive or unnecessary meetings? *

15. This question regards your own efforts when creating a meeting

	Never	Very rarely	Rarely	Neutral	Often	Very often	Always
I am certain that the only people I invite to my meetings are the ones who are needed	○	○	○	○	○	○	○
I make sure that I do not invite several people with the same knowledge	○	○	○	○	○	○	○
I am well prepared for my meetings	○	○	○	○	○	○	○
I send a detailed agenda with all my meeting invites	○	○	○	○	○	○	○

16. Overall quality index *

	Terrible	Bad	Slightly bad	Neither good nor bad	Slightly good	Good	Amazing
How would you rate the average Lynk & Co meeting	○	○	○	○	○	○	○

17. Anything you would like to add?

Appendix II - Summary of changes from the survey pre-test

Table 2.1: Summary of changes from the survey pre-test

Original Question	New Question	Explanation of the change
Do you believe that there are too many meetings at Lynk & Co at the moment?	There are more meetings than necessary at Lynk & Co	Changing the question to a statement since it is a likert scale and adding "than necessary" for respondents to perhaps be able to benchmark the meetings to something more concrete.
In your own opinion, what could be done to prevent the wasting of your time through unproductive or unnecessary meetings?	In your own opinion, what could be done to prevent the wasting of your time through unproductive or unnecessary meetings?	Not a change in the question but in the Survey question order. Changed from question number 10 to question number 14 as potential improvements are better suited at the end of the survey.
If one of the above "Before-meeting questions" were rated low, is this something bothering you which and that in your opinion affects meeting efficiency? If yes, please elaborate why.	If one of the above "Before-meeting questions" were rated low, is this something bothering you which and that in your opinion affects meeting efficiency? If yes, please elaborate why and give an example.	Highlighted that an example should be used for a more in depth understanding of the problem.
If one of the above "In-meeting questions" were rated low, is this something you think affects the meeting quality? If yes, please elaborate why.	If one of the above "In-meeting questions" were rated low, is this something you think affects the meeting quality? If yes, please elaborate why and give an example.	Highlighted that an example should be used for a more in depth understanding of the problem.
-	-	Defined every point on the seven point likert scale instead of only point number one and seven.
How old are you? [Numerical]	How old are you? [Categorial]	One respondent raised concerns regarding anonymity and that respondents might feel reluctant to answer truthfully when asked this question combined with the department they worked. Also added "prefer not to say".
What is your gender?	What is your gender? [Added another categorical answer]	Added "prefer not to say" because of anonymity concerns.
-	Anything you would like to add?	Added a last question that respondents can add anything they perhaps felt that the survey missed.
How would you rate the meeting culture at Lynk & Co?	How would you rate the average Lynk & Co meeting?	Removing "culture" as this question should focus on the quality of the meetings, not the meeting culture.

Appendix III - Cronbach alpha analysis for Construct 3 in the survey pre-test

The items (Likert scale questions) in *Construct 3* had to be rephrased. This was shown in in Statgraphics Centurion, where the alpha would be negative if the questions "C3 (*I have my camera turned on during the meetings I attend)*" and "*C3 (I am active in the conversations in the meetings I attend)*" were to be omitted, highlighting that the average covariances of the questions were negative (Cho & Kim, 2015; Cronbach & Hartmann, 1954). The data from Statgraphic Centurion can be seen in Table 3.1.

Table 3.1: Cronbach's alpha if variables in *Construct 3* were to be omitted

Omitted Variable	Alpha if Omitted
C3 (I Multitask in the meetings I attend)	0,6278
C3 (I have my camera turned on during the meetings I attend)	-0,3565
C3 (I am active in the conversions in the meetings I attend)	-0,2454

Rephrasing the question "*C3 (I multitask in the meetings I attend)*" would therefore, most likely, result in an increased Cronbach alpha. To test this the data from the likert scale question "*C3 (I multitask in the meetings I attend)*" was inversely coded, where a response of one became a seven, a two became six, and so forth. This test resulted in a Cronbach alpha of 0,4856 for *Construct 3*. According to Perry et al. (2004) a Cronbach alpha of 0,5 is sufficient enough to explain the underlying construct and should therefore not be excluded from the final survey. The rephrasing of the likert scale question "*C3 (I multitask in the meetings I attend)*" can be seen in Table 3.2.

Table 3.2: The rephrasing of the likert scale question "*C3 - I multitask in the meetings I attend*"

Before the rephrasing	**After the rephrasing**
C3 (I Multitask in the meetings I attend)	*C3* (I am fully focused on the things being said during the meeting (For example, I do not multitask))

Appendix IV - The demographic variety of the survey respondents

The answers from the survey respondents ranged from different genders, age groups, employee position, and departments within Lynk & Co. The percentage of males and females that answered the survey can be seen in Figure 4.1. The percentage of different age groups that answered the survey can be seen in Figure 4.2. The percentage of managers and non-managers that answered the survey can be seen in Figure 4.3. The percentage of different departments that answered the survey can be seen in Figure 4.4.
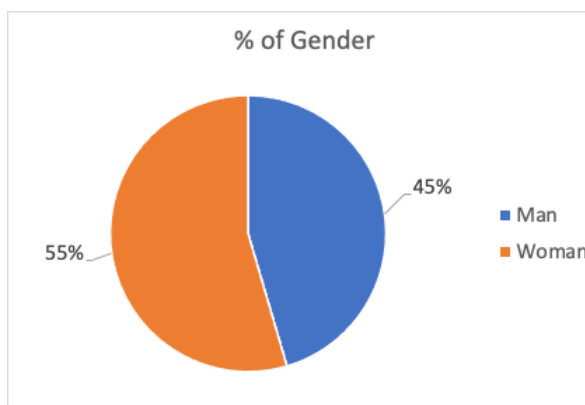
Figure 4.1: The percentage of males and females that answered the survey
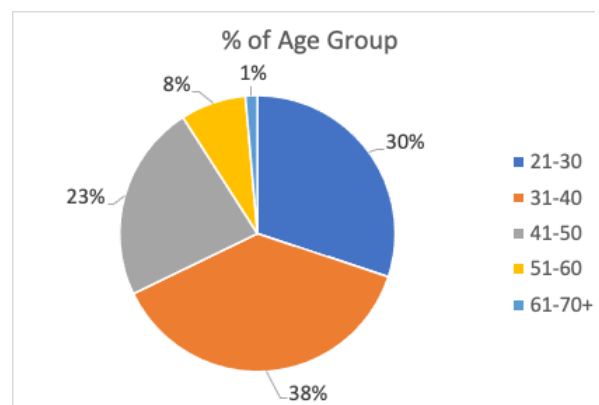
Figure 4.2: The percentage of different age groups that answered the survey
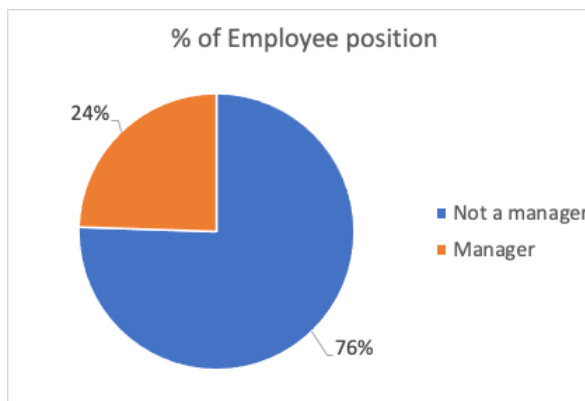
Figure 4.3: The percentage of managers and non-managers that answered the survey
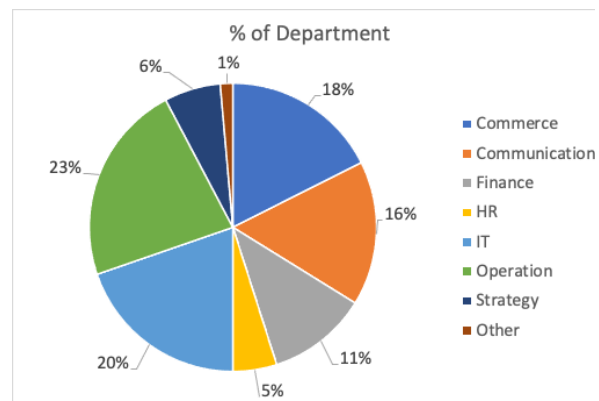
Figure 4.4: The percentage of different departments that answered the survey

Figure 4.1 shows that there are more females than males that have answered the survey. Figure 4.2 shows that there is a single digit percentage of employees in the age groups 51-60 and 61-70+ that have answered the survey. Figure 4.3 shows that almost one fourth of the employees that answered the survey are managers. Figure 4.4 shows that there is a single digit percentage of employees from the Other-, HR, and Strategy department that have answered the survey. Furthermore, Figure 4.4 does not address the legal department at Lynk & Co since no one from the legal department answered the survey.

Appendix V - Assumptions for the first multiple regression model

The results from the actions highlighted in Table 5 in section *4.6.1 Quantitative data analysis* are presented below where the Figures and Tables were extracted from the software Statgraphics Centurion.

Linearity

The assumption regarding linearity is that the variables should be related linearly, showing an upward or downward slope when plotted against its component effect. Figure 5.1 shows a linear relationship between *Hours in meetings per day* and the component effect. Figure 5.2 shows a local scatter of data points when plotting *Construct 1* and its component effect. However even though there is a local scatter of data there is a somewhat linear relationship between *Construct 1* and its component effect. Figure 5.3 shows a similar local scatter of data points as Figure 5.2 i.e., a somewhat linear relationship between *Construct 3* and its component effect.
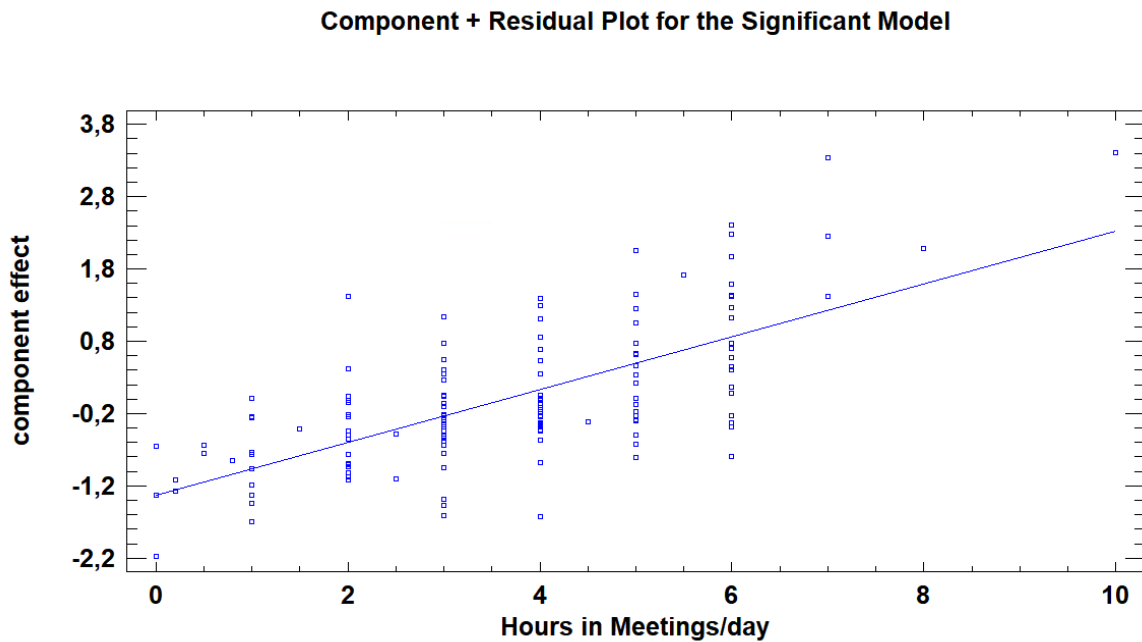
Figure 5.1: Component and residual plot for the independent variable *Hours in meetings per day* in the first multiple regression model
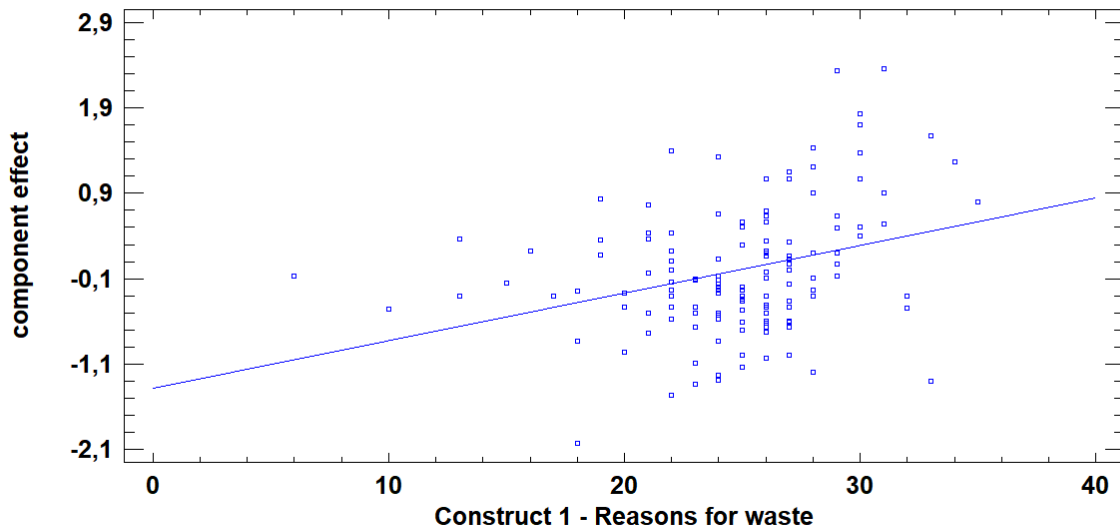
Figure 5.2: Component and residual plot for the independent variable *Construct 1* in the first multiple regression model
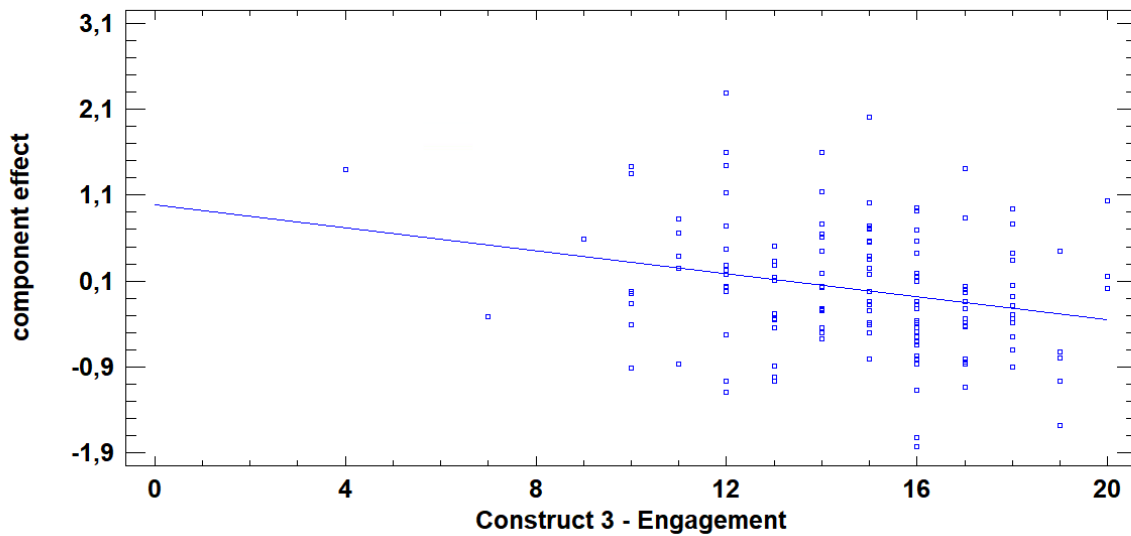
Figure 5.3: Component and residual plot for the independent variable *Construct 3* in the first multiple regression model

No outliers

No outliers of data should be observed in the data set since multiple regression models are sensitive to outliers. This would also affect the normality of the residuals. Which can be seen in a residual probability plot. Figure 5.4 shows that there are two potential outliers in the residual probability plot, however these are not seen as significant outliers as they are rather close to the diagonal line in the plot.
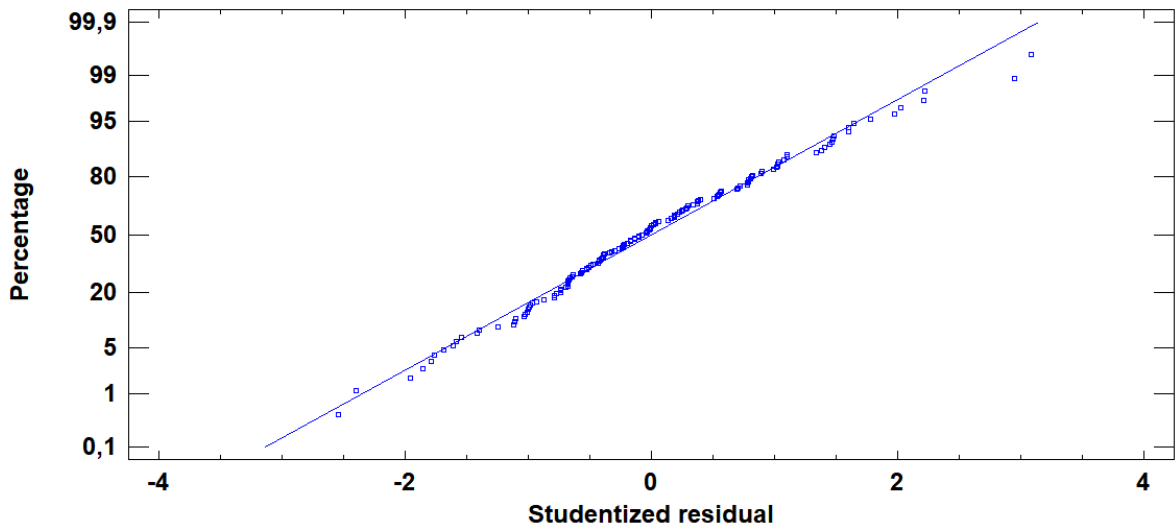
Figure 5.4: Residual probability plot for the first multiple regression model

Similar spread across range

The data should be spread across the range of the data, e.g., it should not have lesser spread at lower values nor greater spread at higher values. This can be shown in a residual plot, plotting the row number against the residual. Figure 5.5 shows that the residuals have a similar spread across the row numbers in the data.
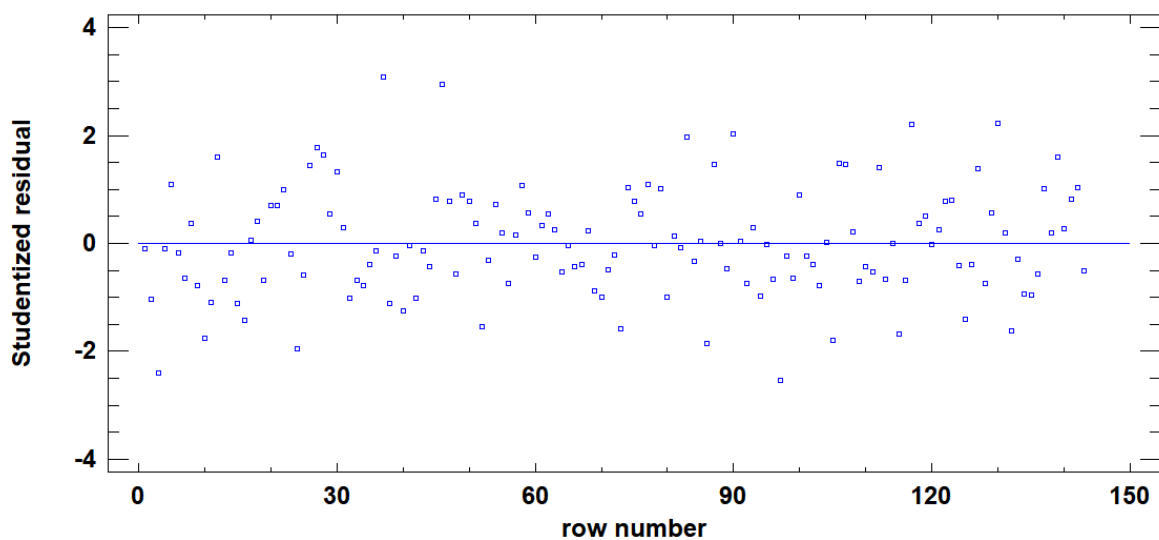
Figure 5.5: Residual plot for the first multiple regression model

Normality of Residuals

The residuals from the model and the actual data should follow a normal distribution. This will assure that there is not a systematic bias in the prediction. This can be observed via a

histogram, plotting the residuals against their frequency. This can also be calculated via a test for normality e.g., a Chi-squared-, Shapiro-Wilk-, Skewness Z-score-, or Kurtosis Z-score test. Figure 5.6 shows that the histogram of the residuals have the appearance of a normal distribution curve, indicating that the data could be normally distributed. Table 5.1 shows that all the normality tests are non significant, indicating that we cannot reject the idea that the residuals come from a normal distribution.
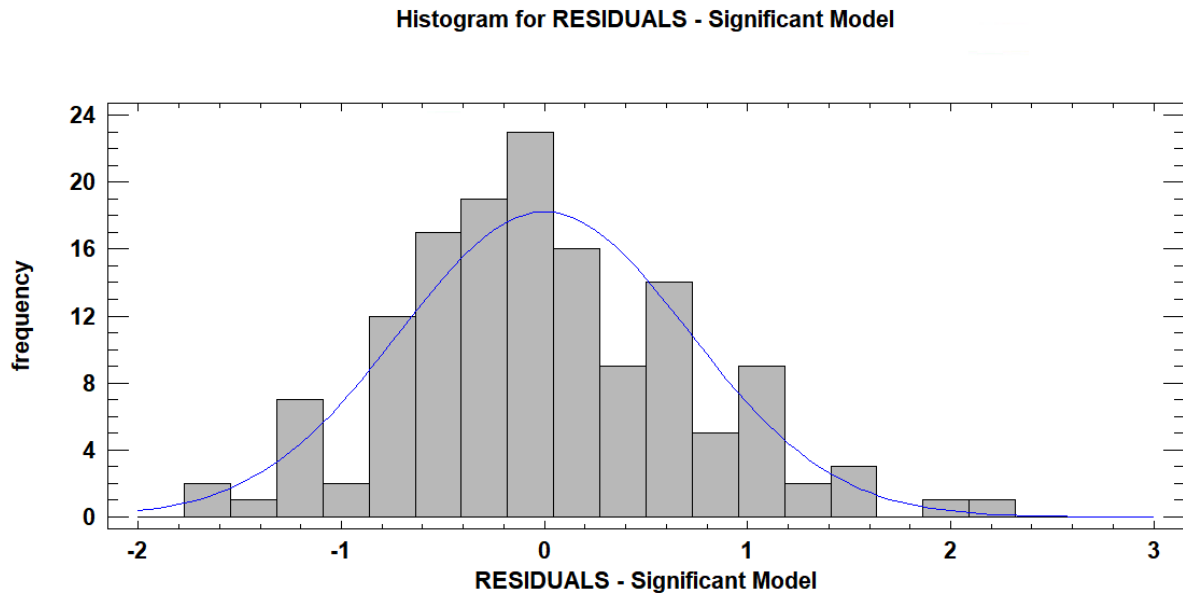
Figure 5.6: Histogram of the residuals from the first multiple regression model

Table 5.1: Tests for normality of the residuals from the first multiple regression model

Tests for Normality for RESIDUALS FULL MODEL

Test	Statistic	P-Value
Chi-Square	25,979	0,408719
Shapiro-Wilk W	0,990372	0,434713
Skewness Z-score	1,06935	0,284913
Kurtosis Z-score	0,749158	0,45376

No multicollinearity

Multicollinearity is when independent variables are correlated and if present could result in the model becoming less reliable. Multicollinearity can be observed via a correlation matrix e.g., a Pearson Product-Moment Correlation matrix. Figure 5.7 shows that the independent variables are not highly correlated.
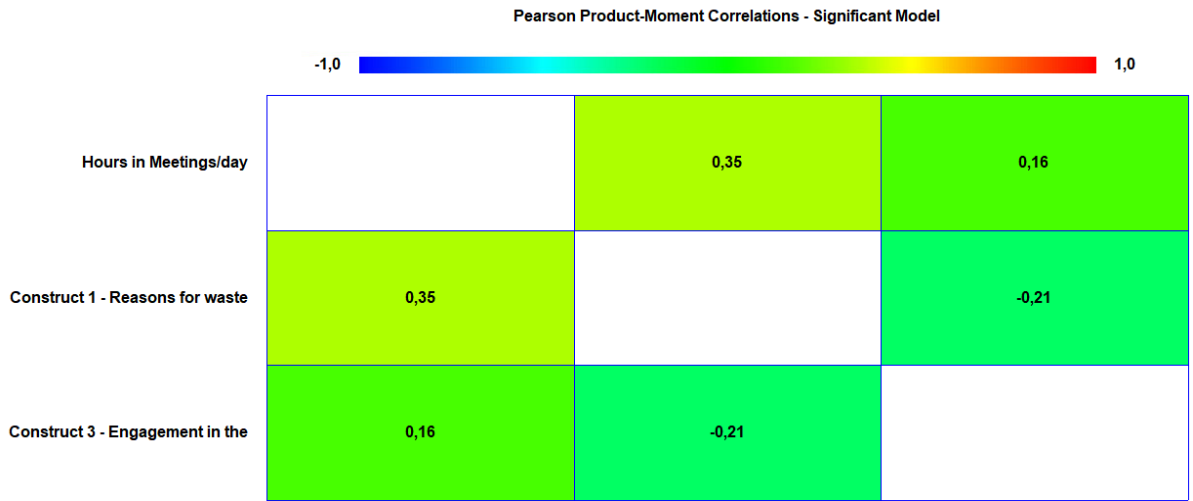
Figure 5.7: Pearson Product-Moment Correlation matrix for the first multiple regression model

Appendix VI - Assumptions for the second multiple regression model

The results from the actions highlighted in Table 5 in section *4.6.1 Quantitative data analysis* are presented below where the Figures and Tables were extracted from the software Statgraphics Centurion.

Linearity

The assumption regarding linearity is that the variables should be related linearly, showing an upward or downward slope when plotted against the component effect. Figure 6.1 shows a linear relationship between *Hours in meetings per day* and the component effect. Figure 6.2 shows a somewhat negative linear relationship, however it is not that apparent, which could be caused by the fact that the variable is based on a likert scale. Figure 6.3 shows a somewhat positive linear relationship, however it is not that apparent, which could be caused by the fact that the variable is based on a likert scale. Figure 6.4 and 6.5 are similar to Figure 6.2 i.e., showing a somewhat negative linear relationship.
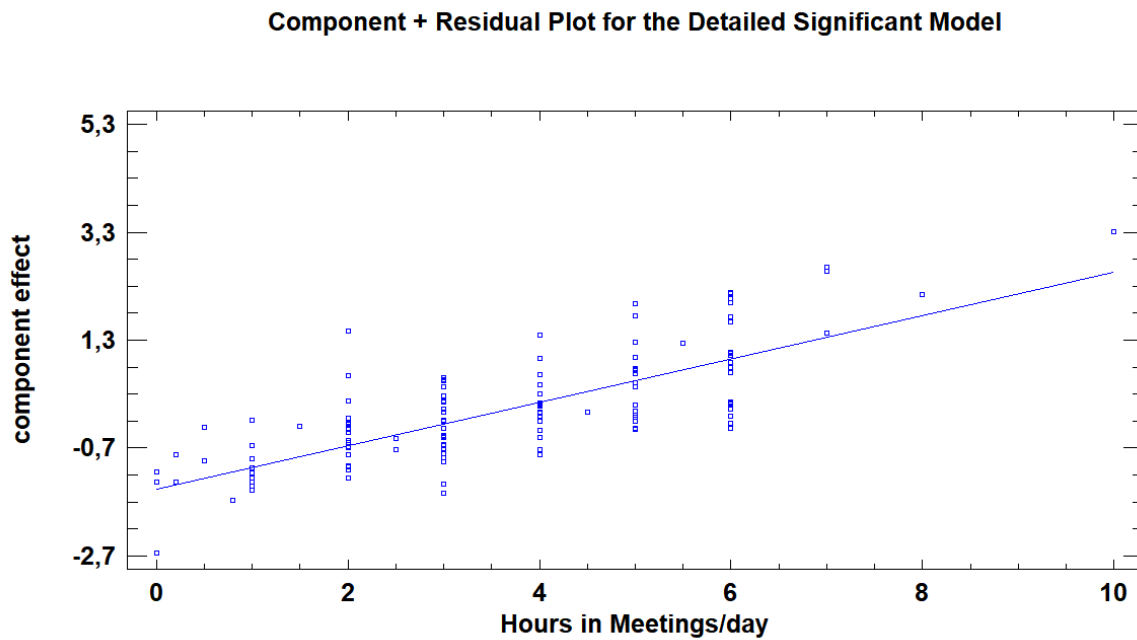
Figure 6.1: Component and residual plot for the independent variable *Hours in meetings per day* in the second regression model
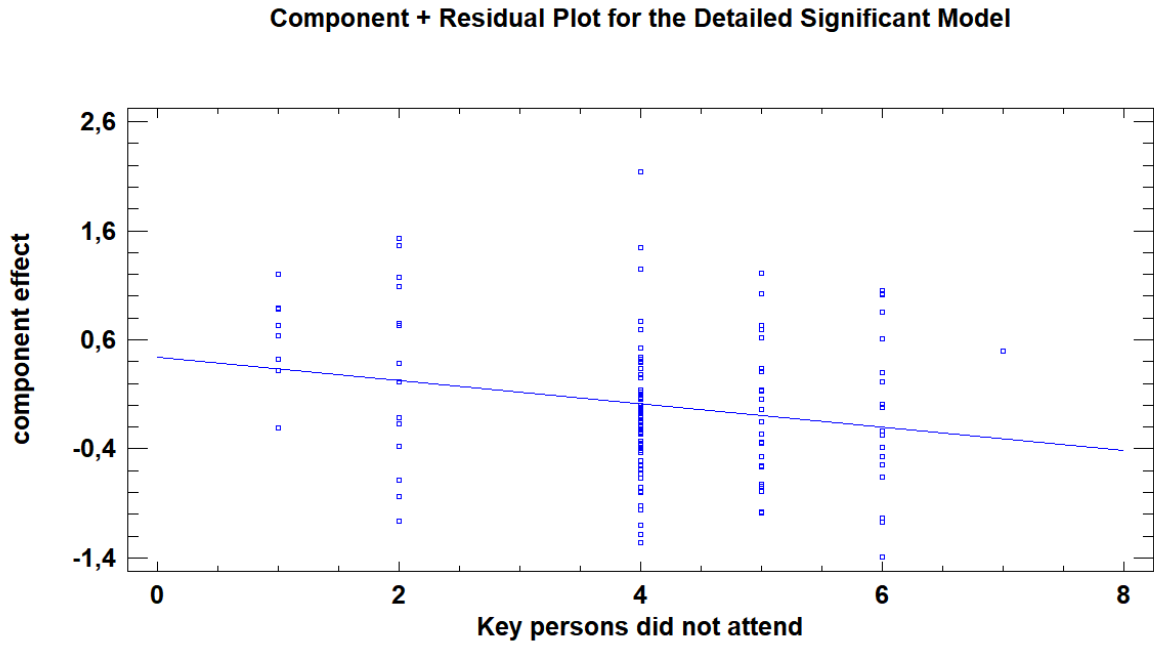
Figure 6.2: Component and residual plot for the independent variable *C1 (Key persons did not attend the meeting)* in the second regression model
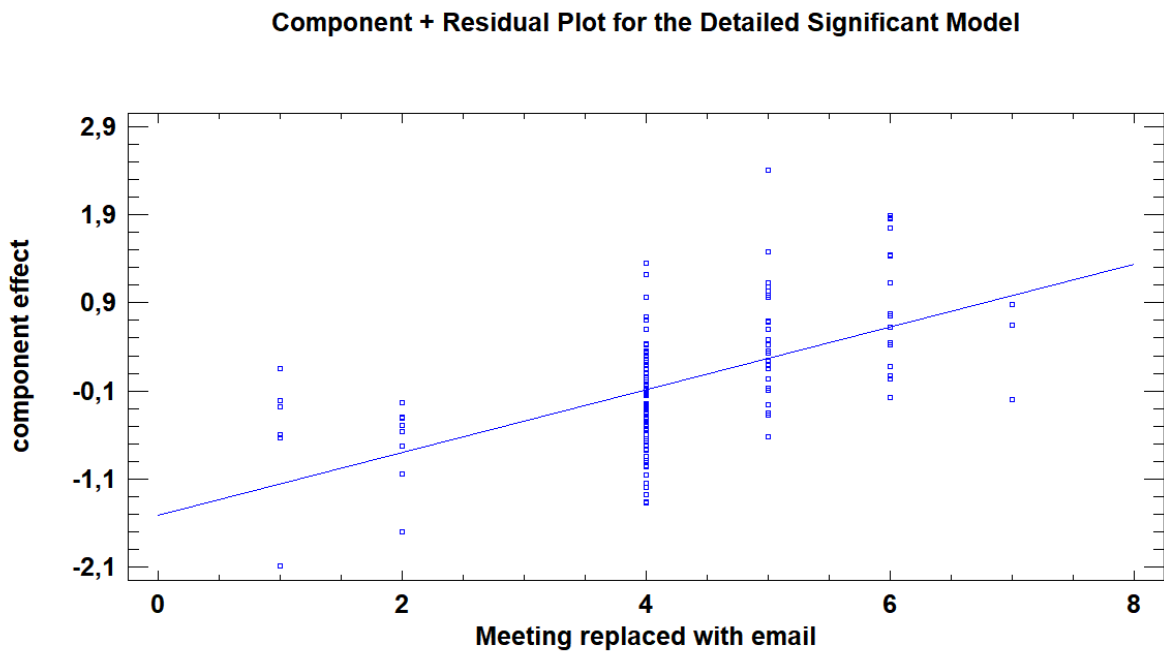

Figure 6.3: Component and residual plot for the independent variable *C1 (Meeting could have been replaced with an email)* in the second regression model
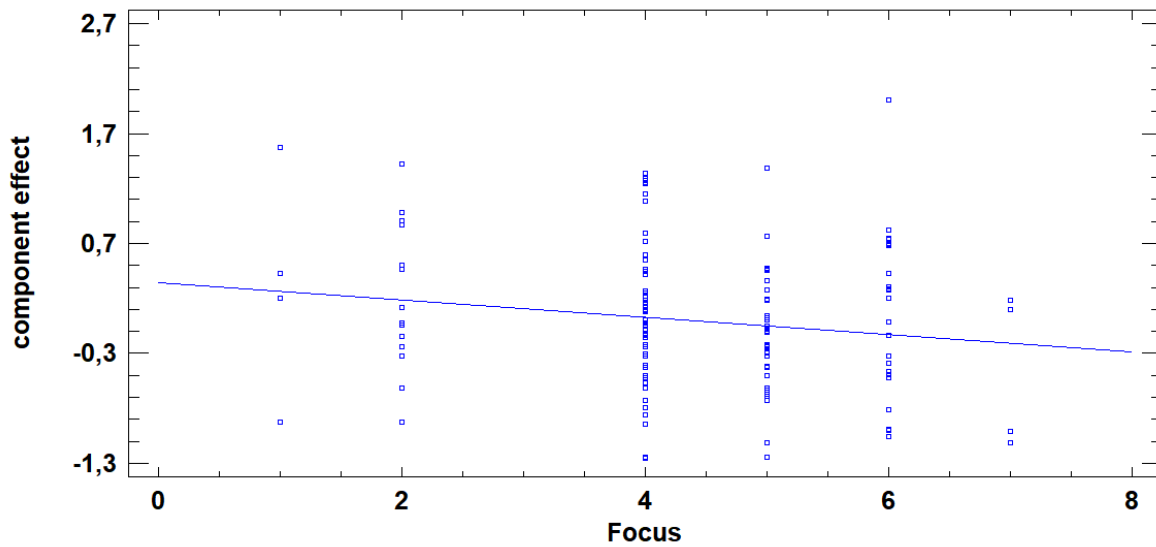
Figure 6.4: Component and residual plot for the variable *C3 (I am fully focused on the things being said during the meeting (For example, I do not multitask))* in the second regression model
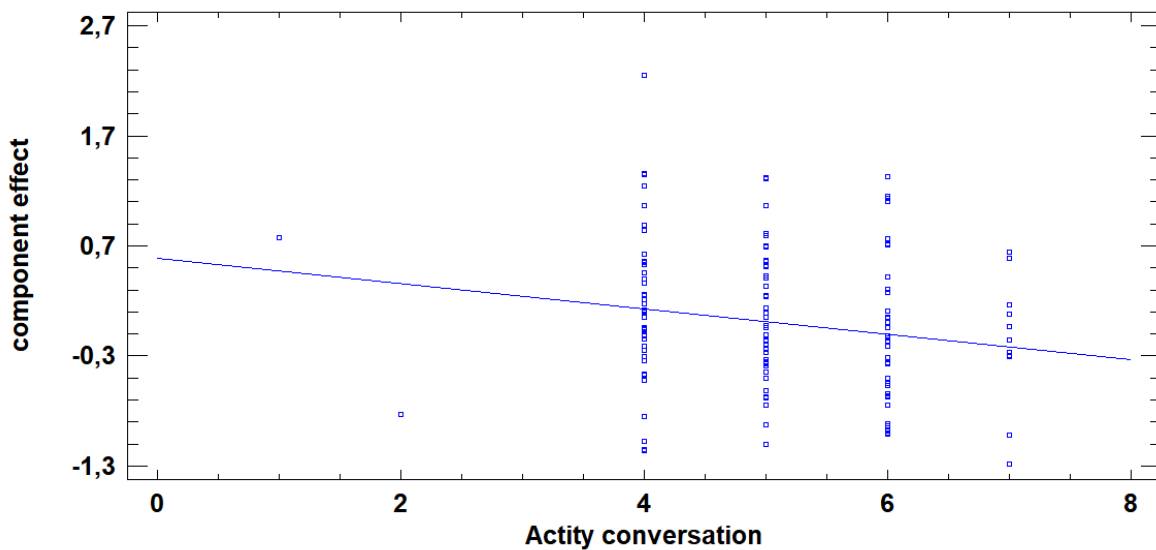
Figure 6.5: Component and residual plot for the independent variable *C3 (I am active in the conversations during the meeting)* in the second regression model

No outliers

No outliers of data should be observed in the data set since multiple regression models are sensitive to outliers. This would also affect the normality of the residuals. Which can be seen in a residual probability plot. Figure 6.6 shows that the data follows the diagonal line with one exception which is the data point in the far upper right corner. This could be a potential significant outlier which can result in the residuals not being normally distributed.
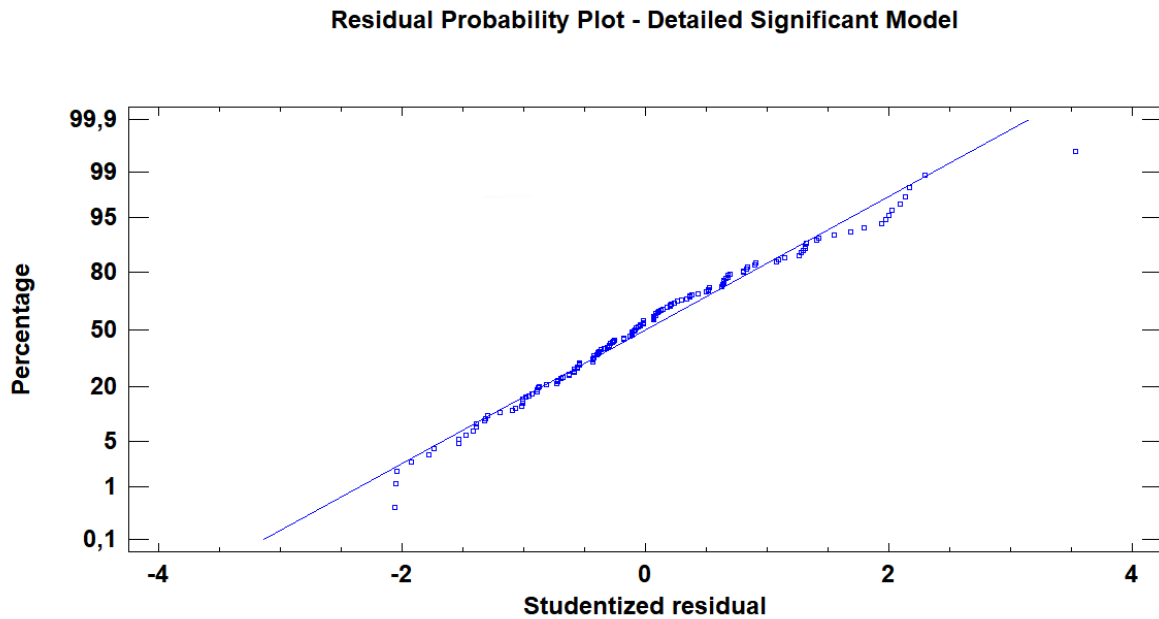
Figure 6.6: Residual probability plot for the multiple regression with numeric- and likert scale variables

Similar spread across range

The data should be spread across the range of the data, e.g., it should not have lesser spread at lower values nor greater spread at higher values. This can be shown in a residual plot, plotting the row number against the residual. Figure 6.7 shows that the residuals have a similar spread across the row numbers in the data.
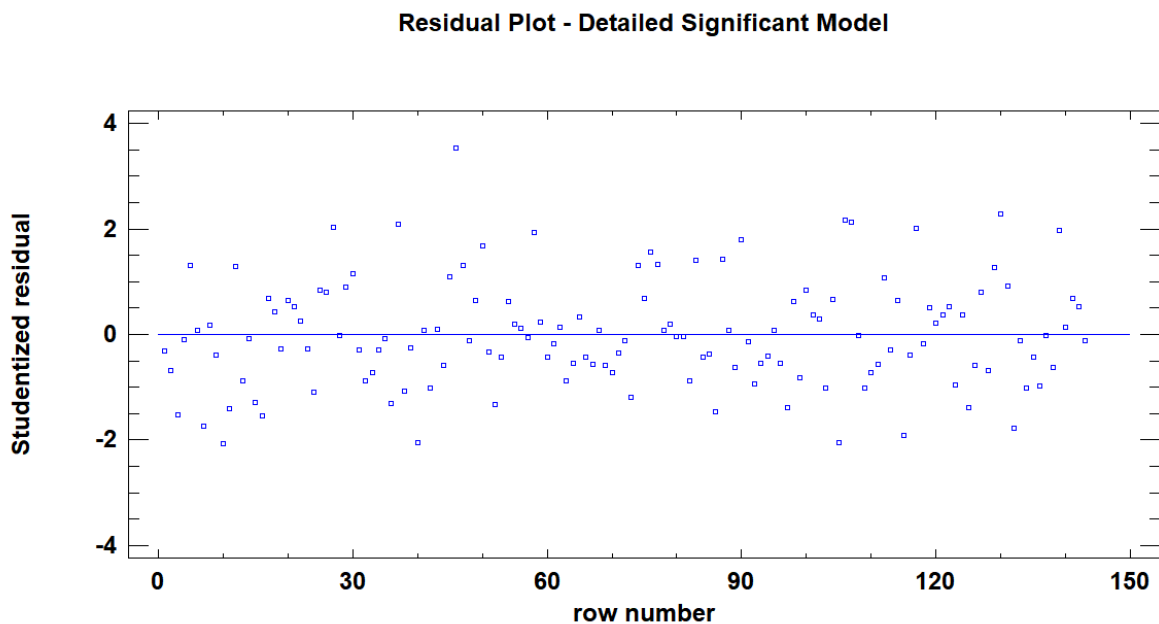

Figure 6.7: Residual plot for the multiple regression with numeric- and likert scale variables

Normality of Residuals

The residuals from the model and the actual data should follow a normal distribution. This will assure that there is not a systematic bias in the prediction. This can be observed via a

histogram, plotting the residuals against their frequency. This can also be calculated via a test for normality e.g., a Chi-squared-, Shapiro-Wilk-, Skewness Z-score-, or Kurtosis Z-score test. Figure 6.8 shows that the histogram of the residuals have the appearance of a somewhat normal distribution curve, indicating that the data could be normally distributed. Table 6.1 shows that all the normality tests are non significant, indicating that we cannot reject the idea that the residuals come from a normal distribution. However, the Shapiro- Wilk test is significant at the 90% confidence interval. This could be explained by the outlier previously mentioned, this outlier can also be seen in Figure 6.8 at X=2,3.
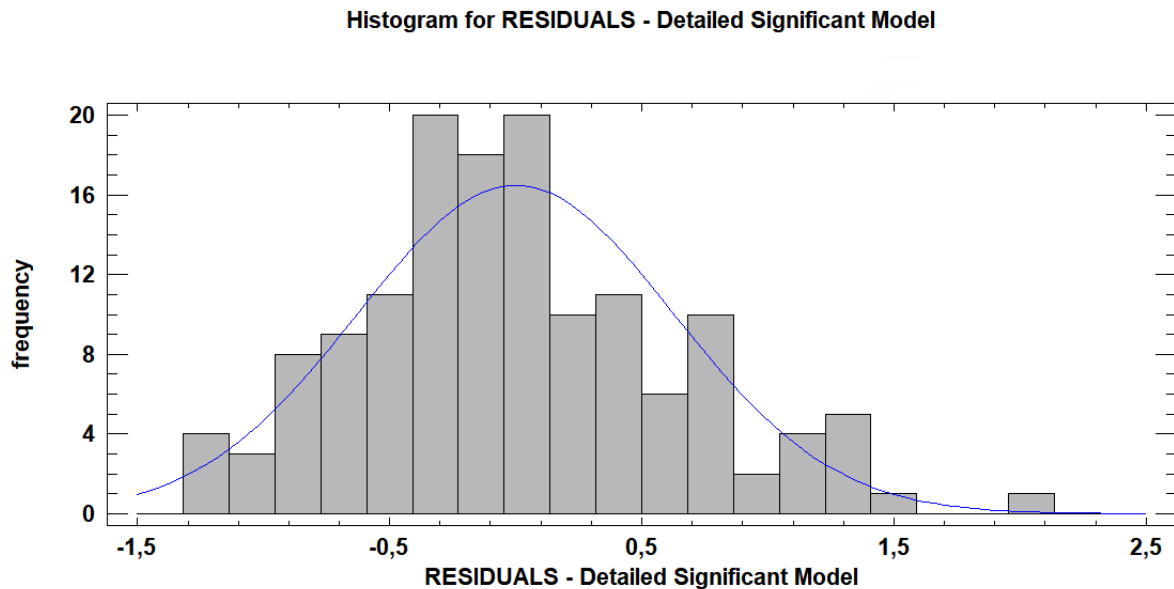

Figure 6.8: Histogram of the residuals from the multiple regression with numeric- and likert scale variables

Table 6.1: Tests for normality of the residuals from the multiple regression with numeric- and likert scale variables

Tests for Normality for RESIDUALS IN DETAIL

Test	Statistic	P-Value
Chi-Square	22,0629	0,632107
Shapiro-Wilk W	0,982525	0,0652225
Skewness Z-score	1,57519	0,115212
Kurtosis Z-score	0,799242	0,424148

No multicollinearity

Multicollinearity is when independent variables are correlated and if present could result in the model becoming less reliable. Multicollinearity can be observed via a correlation matrix e.g., a Pearson Product-Moment Correlation matrix. Figure 6.9 shows that the independent variables are not highly correlated
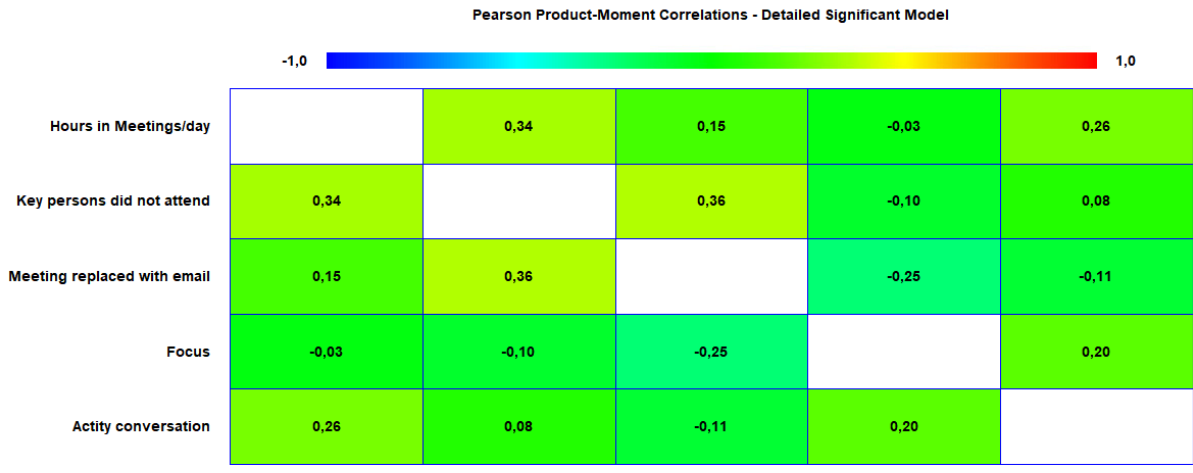
Figure 6.9: Pearson Product-Moment Correlation matrix for the multiple regression with numeric- and likert scale variables

Appendix VII - Lynk & Co Meeting Policy

Meetings are a necessary tool for decision-making, problem solving, communication, and team participation. Without meetings, Lynk & Co would not function. However, the meetings at Lynk & Co have shown to be too frequent, inefficient, and include too many attendees that are not needed. Furthermore, plenty of the meetings held at Lynk & Co suffer from bad planning and follow up, which creates the need for more unnecessary work.
Lynk & Co's new meeting policy is designed to instate tools that will make everyone's time more efficient and reduce the overall waste happening through unnecessary meetings.

Lynk & Co Meeting Policy
- All meetings must have an attached agenda where the following is clearly stated:
    - Background for the meeting – Why do we need this meeting?
    - What will the meeting go through – Describe the current issues and questions so attendees can prepare
    - What is the goal of the meeting – Brainstorming, discussion, decision making, etc
    - What is needed from each team/department that is invited
- Meeting follow up – After the meeting, a follow up email should be sent out stating the result from the meeting, what has been decided, each individual's responsibility, and what will happen next regarding the discussed topic
- As an invitee, it is your responsibility to accept or deny a meeting invitation as quickly as possible, as well as to answer any outstanding questions that has been asked prior to the meeting
- Always start the meeting on time regardless of late participants
- End the meeting early – Do your best to end all meeting five minutes prior to the original scheduled meeting time to give each participants a few minutes of preparation for their next meeting

The following guidelines will provide additional clarification and help you adhere to the new meeting policy. These guidelines will also help you have great meetings.

Meeting Planning:
The key to holding good meetings is for the meeting caller to spend more time preparing for the meeting, so that the participants time and be used to the most efficiently. Before calling to a meeting, make sure to answer the following questions:
- Is a meeting necessary, or can it be replaced with an email instead?
- What is the objective for this meeting? - Answering this question will allow for the necessary preparation, and will assist in deciding who to invite
- Who is needed in the meeting - Make sure that only the absolutely necessary people are invited
- Have I created a strong and detailed agenda? - If not, do it before sending the invite

Agenda Template

Hello everyone,

I am calling for this meeting in order for us to align on issue X that appeared yyyy/mm/dd that is making Y not appear in Z, hence creating an abnormal amount of manual work for department P. The goal for this meeting is to make a <u>decision</u> on where the responsibility lies, as well as the action points we need to take in order to fix it.

In the meeting we will go through the following points:
- A
- B
- C

Outstanding questions that has to be answered by each department:
Team 1: Question
Team 2: Question
Team 3: Question

Best regards,