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Master Thesis

Virtual Realities for Remote Working

*Exploring employee's attitudes toward the use of
Metaverse for remote working*



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Abstract

Introduction: Ever since the transition to digital ways of working started spreading across organizations and industries in the late 1970s, remote working has been a topic of interest. With the development of information and communications technology, virtual realities are now receiving more attention with a broader view of potential application areas. The application of virtual realities is expanding. Hence, the concept of Metaverse has received a great deal of attention. Metaverse is a virtual reality idea where people create avatars that exist in a three-dimensional virtual world. While the use of virtual realities is expanding on new ways of working, users' attitudes toward these technological developments are important to consider as it can either increase the benefits of working from home or highlight the negative aspects even more.

Purpose: The purpose of this thesis is to explore the attitudes towards the use of virtual realities for remote working in the case of employees within organizations in Sweden. The aim is to further provide an understanding as to what organizations need to consider following the increased use of virtual realities.

Research Questions: What are the attitudes of employees towards the use of virtual realities for remote working? How can organizations adapt to the implementation of virtual realities for remote working to continuously ensure a positive work environment for its employees?

Methodology: In order to reach the purpose of this study and answer the research questions, a qualitative research approach was deemed appropriate for this study to understand the "what" and "how" aspects of the use of virtual realities for remote work. Semi-structured interviews were chosen as the data-collection method where the respondents were employees within organizations in Sweden.

Conclusion: The key takeaways are that attitudes toward virtual realities for remote working are complex. The main themes discussed around remote working were control and freedom to decide over one's work and the loss of comradery with colleagues and social isolation. New technology, such as Metaverse, has to ensure it continues providing employees with control over their work but solves the issues of social isolation while still not eliminating physical interactions between colleagues completely. Management has to deeply consider the needs of the individual employee before implementing new technology, gathering an understanding of what is expected and needed by their specific employees to better ensure successful implementation.

Key Words

Remote working, virtual reality, Metaverse, attitudes, information and communications technology, positive work environments



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1 Introduction

This introductory chapter will present the reader with the scope of the study. It provides background as to why the thesis topic is of interest, what Metaverse is and why it has increased in popularity, and further problematize the topic. The purpose and research questions are presented, together with an outline of the paper that will give the reader an idea of the content of the thesis. Finally, delimitations of the study are presented.

1.1 Background

Ever since the transition to digital ways of working started spreading across organizations and industries in the late 1970s, remote working has been a topic of interest (Vilhelmson & Thulin, 2016). Remote working, sometimes referred to as teleworking, telecommuting or flexible work, is a way of carrying out one's work that is not in the facilities of one's office but rather somewhere away from co-workers where communication is enabled through the use of new technology (Di Martino & Wirth, 1990). This new technology that enables communication across physical borders is known as information and communications technology, whose capabilities have remarkably advanced throughout the years and led the overall technological advancement (Wang et al. 2021). Remote working has therefore been enabled through the extensive development of information and communications technology as can be validated by referring to the currently ongoing pandemic. With the COVID-19 virus roaming across the globe, bringing about a whirlwind of change for companies, remote working became reality for many (Phillips, 2020). While Chung and van der Lippe (2020) found in their research that remote working is mainly desired among a majority of millennials, it is expected to become the norm rather than an exception that affects all demographics. The COVID-19 pandemic has proven this to be true as it has lasted longer than firstly anticipated and therefore forces remote working to continue (Merchant, 2021).



The growth of remote working has introduced a variety of advantages and disadvantages. Recognized benefits such as improved work-life balance, overall well-being at work, and reduced work-family conflicts are often used to promote the continuity of remote working (Dittes & Smolnik, 2019; Renard et al. 2021). Ipsen et al. (2021) identified a number of disadvantages from working from home during the COVID-19 pandemic. The main disadvantages were a lack of social interaction with colleagues, not getting out of the house enough, and poor physical working conditions in the home office. Researchers such as Dittes and Smolnik (2019), Renard et al. (2021) and Ipsen et al. (2021) show that individuals respond differently to change by identifying a wide range of responses to the readjustment required of employees as an outcome of remote working. While there are a set of advantages and disadvantages weighing against each other, remote working is here to stay, and the development of platforms facilitating this new way of working is only growing (Ipsen et al. 2021).

The concept of virtual realities has been around for quite some time, with research referring back to the 1960s and 1970s (Dionisio, Burns III & Gilbert, 2013). With the development of information and communications technology, virtual realities are now receiving more attention with a broader view of potential application areas. Virtual realities are understood to give users access to virtual environments that either resemble the real world or create imaginary surroundings to one's preferences by the help of technology (He and Zhu, 2022). The main use of virtual realities has previously been for education purposes in fields such as the military and health care (McGovern, Moreira & Luna-Nevarez, 2020; Liu et al. 2018). Additionally, the gaming industry has seen great potential in adapting virtual realities in the development of their products to promote a deeper emotional connection for players (Pallavicini, Pepe & Minissi, 2019).

The application of virtual realities is however expanding and is creating new opportunities for businesses (Manis & Choi, 2019; Loureiro et al. 2019).



Hence, the concept of Metaverse has received a great deal of attention. Metaverse is a virtual reality idea commenced by Neal Stephenson in 1992 where people create avatars that exist in a three-dimensional virtual world (Dionisio, Burns III & Gilbert, 2013). It is further believed that Metaverse is an evolution under way, and with remote working only growing, companies such as Facebook and Microsoft are seeing increased possibilities of its application for the purpose of enhancing the remote working experience for employees (Kim, 2021). While the use of virtual realities is expanding on new ways of working, users' attitudes toward these technological developments are important to consider as it can either increase the benefits of working from home or highlight the negative aspects even more (Yarberry & Sims, 2021). Research has been successful in identifying a correlation between the happiness of employees and the level of employee engagement that leads to organizational success. Hence, it clarifies that considering employees' attitudes toward change that occurs in an organization is essential to predict the level of success of that change (Fisher, 2010; Joo & Lee, 2017).

1.1.1 Metaverse

With Metaverse taking the lead on the development of extended realities, the authors see fit to provide the reader with up-to-date background information about the concept of Metaverse that underlies the purpose of this thesis topic. To do so, news articles on the possibilities and opportunities that Metaverse presents for remote working in today's society are reviewed to show why it has become as popular as it has and why bigger corporations are now embracing its potential.

The reason Metaverse has amplified in popularity among the general public is mainly due to Facebook's announcement in October of 2021 that the company is rebranding itself to Meta, as a result of redirecting its focus to the development of Metaverse (Alvim, 2022). Although Metaverse is argued to be years away, advancements in virtual realities are showing that the technology



is nearly there and that the concept has the potential of being the future of the Internet, opening a world of new digital possibilities (BBC News, 2021). The global COVID-19 pandemic has contributed to the realization of opportunities for the use of Metaverse in the workplace, changing the direction of its now use in entertainment to be used in people's professional lives as well (Fernandez, 2022). The underlying idea of Metaverse is to create a digital space that intensifies social interaction to resemble the interaction in physical contexts (Alvim, 2022). Regular video conferencing, meaning remote working as we know it today, fails to embrace the human interaction of an in-person meeting, which in turn affects the level of collaboration among employees. Metaverse is thought to help remote working reach its full potential by replicating physical work contexts to encourage camaraderie that inspires creativity and increases productivity (Fernandez, 2022).

There is no one single definition of what Metaverse is as it is yet to be fully developed, hence, leading actors such as Meta (previously Facebook) take the opportunity to create their own definitions and imagery of what it could be (BBC News, 2021). However, abstractly defined, Metaverse is a virtual space accessed through a head-mounted display in which users can engage with others as if they are present in the same room, making the interaction through non-verbal gestures possible as well. The idea with Metaverse is to create a fully immersive world where people create avatars that interact with others and the environment in the virtual space to replicate human interaction in the real world (Alvim, 2022). Up until recently, virtual reality technology has mostly been associated with the gaming industry where players can create their own virtual worlds such as Fortnite. Fortnite has also recognized the potential of Metaverse and changed the conception of it from only being a game to creating a social place for its users. The Fortnite game does further include additional features in which its users can spend money to access, such as dress-up options for one's character (i.e avatar) (Herrman & Browning, 2021).



Spending money to gain access to certain features in a virtual world is something that is gaining recognition amongst companies who are considering Metaverse, as opening up possibilities of new revenue streams by providing currency and introducing non-fungible tokens (NFTs) as goods in the virtual space (Alvim, 2022). For companies applying the technology in their workspace, buying land to build one's office space is less expensive than in reality, further offering opportunities of full customization to suit specific needs. The customization of office spaces translates into the possibilities of choosing one's environment to work in, whether it be on a beach or a grass field, as well as scalability, to easily increase or decrease the size of one's office space according to a company's needs (Analytics Insight, 2022).

Essentially, the growth of Metaverse is due to the changing needs of the individual as a response to the digital era. In terms of employees, as an outcome of the COVID-19 pandemic, the need and desire for flexibility, freedom, and the ability to easily connect and collaborate while securing the social aspects of working remotely has seen an increase and almost become a requirement. Metaverse is therefore being developed as an answer to employees, and societies, changing needs (Analytics Insight, 2022). Companies that fail to recognize that the old way of working is becoming obsolete, risk to fall behind with their business practices and lose credibility (Fernandez, 2022). Hence, staying at the forefront of the technological development of Metaverse is crucial to ensure firms are prepared for its introduction and implementation in the workplace in the future (Alvim, 2022).

1.2 Problem Discussion

Already in 2008 Wagner (2008) and Papagiannidis, (2008) discussed virtual realities becoming as popular as the Internet. Virtual environments have brought forward several challenges that still need to be developed for it to be more efficient (Park & Kim, 2021). Just like the Internet, virtual reality is now developing rapidly and is being implemented in several fields. Researchers



believe that this can have a tremendous impact on the way of sharing and collecting information and communicating in various fields (He & Zhu, 2021). However, when reviewing scholars, there is a lack of research regarding this matter.

The development of virtual environments has come a long way, although the barrier between physical and virtual environments is not clear, and the digital transition is still ongoing. There is a need for more research and development on how to adapt to this emerging technology, in order to become as prominent as the Internet (Lee et al. 2021; Lim et al. 2022; Park & Kim, 2021). Recent studies have discussed virtual environments connected to e-learning and e-leadership, while very few studies have been developed connected to the effect virtual environments can have in workplaces (Liu et al. 2018; Martin & Bolliger, 2018; Roman et al. 2019; Wong et al. 2019). With Metaverse, virtual reality can become more alive and interactive, due to the development of intelligent wearables and computing devices. Although, there is a need for more research and understanding of the use of Metaverse before it can be implemented into the physical world (Lee et al. 2021).

The Covid-19 pandemic forced many employees to work from home, and by this, they also had to learn to use new digital ways of working. The virtual way of working increased, and researchers mean that the attitudes towards virtual working or remote working have shifted from something unknown to a natural part of working (Newman & Ford, 2021; Park et al. 2021). Researchers mean that the virtual environment and remote working will become an important part of working life because of this changed way of working (Park et al. 2021; Newman & Ford, 2021; Yarberry & Sims, 2021). However, attitudes towards virtual realities and remote working have not been broadly explored by scholars (Chatterjee, Chaudhuri & Vrontis, 2022; Newman & Ford, 2021). Faupel and Süß (2019) discussed the importance of leadership when introducing new technologies within an organization to ensure a positive attitude among employees. They mean that with the right leadership, one can create a positive working environment, employee behavior and attitudes



(Faupel & Süß, 2019). In addition to this, Hunt, Sarkar and Warhurst, (2022) discuss the importance of investigating further how the introduction of new technologies within an organization can have an impact at the workplace.

With the emergence of new technologies, companies have been able to adapt to the use of new digital platforms, while employees have been given the opportunity to learn new ways of working and communicating (Saura, Ribeiro-Soriano & Saldaña, 2022). Researchers estimate that the use of new technologies within the workplace will increase in the future, which can impact information and communications technology positively as well as work more efficiently (Thapa, Voola & Yesseleva-Pionka, 2021; Saura et al. 2022; Yarberry & Sims, 2021). Although, in a study by Saura et al. (2022) they found that there can emerge some challenges with remote working and the implementation of new technologies which managers should be aware of. A recent study found that there is a challenge with ensuring the user's privacy and the engagement of the employer, as well as improving equipment for the employees when working remotely with digital technologies. Furthermore, technological issues may occur in which the employee needs guidance on how to solve, which makes it important for companies to include a remote working strategy, for the work to be efficient and avoid issues (Saura et al. 2022). Many organizations have adopted the way of remote working, although recent studies mean that organizations need to develop policies and guidelines regarding remote work for the employees to be engaged with this way of working (Chatterjee, Chaudhuri & Vrontis, 2022; Newman & Ford, 2021; Saura et al. 2022).

The demand for digital ways of working is increasing and creates new challenges and opportunities for both leaders and scholars (Thapa, Voola & Yesseleva-Pionka, 2021; Yarberry & Sims, 2021). The authors of this thesis will attempt to fill this research gap by conducting a case study where virtual realities, such as Metaverse, will be explored in connection to employees within organizations in Sweden.



1.3 Purpose

The purpose of this thesis is to explore the attitudes towards the use of virtual realities for remote working in the case of employees within organizations in Sweden. The aim is to further provide an understanding as to what organizations need to consider following the increased use of virtual realities.

1.4 Research Questions

- What are the attitudes of employees towards the use of virtual realities for remote working?
- How can organizations adapt to the implementation of virtual realities for remote working to continuously ensure a positive work environment for its employees?

1.5 Thesis Outline

This thesis intends to provide the reader with an easy-to-follow outline on the topic of virtual realities for remote working. The introductory chapter familiarizes the reader with the key concepts guiding the thesis work. Background to the growth of remote working and the interest in virtual realities is provided, together with a more detailed explanation of the current rise of Metaverse, followed by a problematization as to why the use of virtual realities for remote working is an exciting topic to research at this given point in time. The purpose and research questions are formulated in this chapter, and delimitations are presented.

The second chapter, theoretical framework, discusses topics such as the notion of information and communications technology and attitudes towards remote working, it clarifies what positive work environments are referred to, discusses the technology acceptance model, and considers the role of management support when implementing change into an organization. The aim of this



chapter is to provide the reader with relevant research which will be used to later analyze the empirical data gathered.

In the third chapter, the approach of how data will be gathered and analyzed is presented together with the chosen research design and ethical considerations. The intent of the methodology chapter is to present how the research has been carried out and argument for the choices made to provide the best possible outcome of the study.

The fourth chapter will present the empirical data gathered. Followed by chapter five where an analysis of the results in connection to the theoretical framework is provided.

Lastly, the sixth chapter will clarify the main conclusions drawn from the research carried out and conclude whether or not the purpose of the thesis has been successfully achieved. The chapter will further provide discussions on theoretical and managerial implications as well as provide suggestions for future research and discuss limitations identified.

1.6 Delimitations

For the purpose of this thesis, to understand employee's attitudes towards the use of virtual realities for remote working, the authors of this paper have chosen to focus its scope on employee's working in organizations located in Sweden. This does not place any restrictions on the organizations being international nor on the individuals being international. The only requirement placed is that the employee's work in organizations located in Sweden. The chosen scope is established to make the findings more applicable into various contexts for the purpose of further research opportunities.

The theoretical framework has been developed on the basis of providing overall knowledge on the topic of attitudes towards virtual realities for remote



working. A conscious decision has been made to not dive deeper into the topics as it would unravel many more details on each that would steer the thesis topic into different directions, leaving the purpose of the thesis unclear for the reader. Furthermore, as the interest lies with understanding the individual employee's attitudes, a qualitative data collection method has been chosen and is seen as the given choice for data collection due to the author's intent to gather deeper knowledge on what influences those attitudes.

Furthermore, while a brief discussion is provided on the topic of different extended realities in the theoretical framework, these are not further focused upon so as to not confuse the reader. Virtual realities, and Metaverse in particular, has been chosen as an example to the development and future possibilities of remote working due to its current popularity.



2 Theoretical Framework

This chapter provides the reader with the perspective of which the researchers are looking at the topic of attitudes toward virtual realities for remote working. It further communicates and clarifies to the reader what the missing links are in previous studies between attitudes and the development of information and communications technology for continued remote working, underlying the purpose of this thesis.

2.1 Development of Information and Communications Technology

In the research on information and communications technology, focus is on the application areas of the technology itself. Neshati and Daim (2017), says that information and communications technology can be found in all facets of human existence, providing examples of areas such as commerce, finance, law, and sports. The research of Ukpabi and Karjaluoto (2017) further focus on the use of information and communications technology in e-tourism, while another large body of literature focuses on its use in education from different angles, i.e teacher or student perspectives (Mumtaz, 2000; McCormick & Scrimshaw, 2001; Hammond, 2010).

Although the application of information and communications technology is versatile, the definition of the concept is parallel across all industries and fields of study (Drent & Meelissen, 2008; Bonvoisin et al. 2014). Information and communications technology is a notion derived from and extended upon the concept of 'Information Technology', which not only refers to the gathering and processing of data but acts as a collective word for all communication technologies (Haigh, 2011; Haddon, 2004). Haddon (2004) further references Dutton's book in 1999 where examples of information and communications technologies are broad and generally defined but argues that it conveys an



understanding of its many possibilities. Examples range from broadcasting and telecommunications to personal computers, video games, and cell phones (Haddon, 2004). Information and communications technology has therefore been identified as a driver for change and innovation in business, creating opportunities that promote new ways of working and conducting business (Bekkers, van Duivenboden & Thaens, 2006). With information and communications technology promoting innovation, which is further supported by the ever-growing globalization and increased flexibility due to internet connectivity, the latest information and communications technology development is that of virtual reality, promoting higher levels of interactivity (Dávideková, Mjartan & Greguš, 2017).

Virtual reality in turn is only one element of three that constitutes the concept of extended realities. See figure 1 drafted by the authors to visualize all real and virtual combined environments that fall under the overarching extended reality terminology. Besides virtual reality, extended reality encompasses augmented and mixed reality as well. They are placed on a spectrum, referring to the level of interaction with the real or virtual world. Augmented reality has the least interaction with the virtual world as it functions by layering the real world with virtual objects to alter what is seen through the use of a technology device. Mixed reality, on the other hand, is an enhancement of augmented reality as it increases the interactivity with the virtual world, allowing greater coexistence of the two worlds within a single display (Kwok & Koh, 2021). With Metaverse being a fully immersive virtual world, it falls under the third term, virtual reality, on the extended reality spectrum. Hence, the authors provide a more detailed explanation of the concept in the following section.

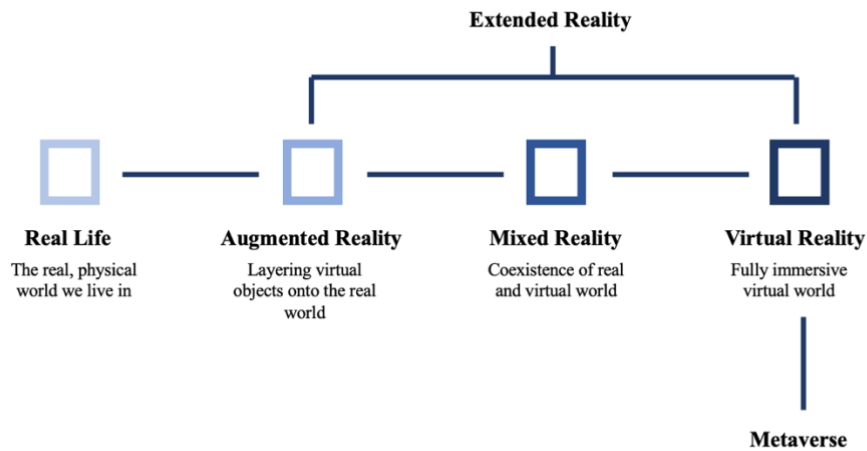


Figure 1: Extended reality spectrum (own source)

2.1.1 Virtual Reality

“a three-dimensional synthetic environment that stimulates a real or imaginary scenario in such an engrossing way that the digital world is perceived as a real one. It integrates a variety of modern information technologies, enhances simulation effects, and works on the user’s senses”
(He & Zhu, 2022, p. 530).

The above quote is a definition of what virtual realities are, provided by researchers He and Zhu (2022). In its early days, virtual reality was nothing more than an idea and a vision that was not convincing enough due to the unfulfilled development of technology at the time (Gutiérrez, Vexo & Thalmann, 2008). With the rapid progress of technology and the introduction of numerous different tools, virtual reality has become a credible information and communications technology product accessible to the public. Not only is virtual reality existing, but it is becoming more and more advanced (Polap et al. 2020). Gutiérrez, Vexo and Thalmann (2008) highlights virtual reality as being a simulation of reality and Farshid et al. (2018), while communicating the same, refers to it as a 3D virtual representation of the actual world.



Application areas are expanding for virtual realities, with research referring to how it can be used in businesses by employees (Collange & Guegan, 2020; Zawadzki et al. 2020).

Collange and Guegan (2020) studied the potential of virtual realities to enhance social interaction while Zawadzki et al. (2020) investigated the effectiveness of its use on employee training. Virtual reality is a broad concept that can imply many different versions, hence, immersion is a terminology often brought up in connection to virtual realities (Peukert et al. 2019). Maas and Hughes (2020) identify different levels of immersion with fully immersive and non-immersive on each end of the scale. Fully immersive virtual reality refers to the use of a head-mounted display connected to a desktop which provides the user with the ability to physically move freely in the virtual environment. On the other side of the scale, non-immersive virtual reality indicates access to a virtual environment through a desktop which limits the virtual experience as it is not directly interacting with the user (Maas & Hughes, 2020). Fully immersive virtual realities are currently the focus of technological development within the area of virtual reality, and Metaverse is a concept gaining popularity as a result. Although the idea of Metaverse might have been around for a while, extensive research on the topic only exists in lite versions (Owens et al. 2011; Kim, 2021).

2.2 Defining and Understanding Attitudes

The study of attitudes has been around for many years (Petty, Wegener & Fabrigar, 1997). In its early years, the definition of attitudes was a lot broader than it is today, indicating a collective and cultural context (Cooper, Crano & Forgas, 2010). Oskamp and Schultz (2005) further clarify that attitude is not equal to behavior, which is often the misconception of the term, but rather a *“predisposition to respond in a particular way to the attitude object”* (p. 8). This further aligns with Cooper, Crano and Forgas' (2010) way of implying that the understanding of attitude is now seen as an individualistic notion that



occurs in the separate mind of each individual, hence, moving away from the initial thought that attitude is collective. With the term attitude object, Oskamp and Schultz (2005) imply that it includes anything from physical objects to people and places, as well as actions and ideas. Bohner and Wanke (2002) indicate the same by further identifying that attitude objects can be concrete or abstract. Attitudes hold a strong influence, while not being equal to behavior it is the direct outcome of attitudes. Hence, an attitude can be seen as the direct reason for a person's certain behavior towards another person, an object, or a way of doing things (Oskamp & Schultz, 2005).

It has been made clear in research that understanding employee's attitudes are crucial when going through organizational change (Fisher, 2010; Joo & Lee, 2017). Choi (2011) further states that intended change in an organization often fails to reach its potential as leaders and management seem to underestimate the central role individuals play as a critical source to success. Hence, knowledge about employee attitudes is not only of interest to researchers but to managers and policy makers as well (De Menezes & Kelliher, 2016). As the importance of understanding employee attitudes for organizational effect have now become self-evident, it is just as essential to connect it to the large-scale change that has occurred across different fields of studies and industries; remote working.

2.2.1 Employees Attitudes Towards Remote Working

Following Choi's (2011) argumentation that successful change in an organization is based on the support of individual employees, it is suggested that the attitudes of employees are what decides on whether or not change will persist in the long-term. Employee's willingness, hence, their attitudes, to alter their work behavior in terms of task performance is the basis for successful change. Remote working, which has been a big change for organizations in how work is performed, has generally been very appreciated by many and the



attitudes towards its implementation have been positive (Dubey & Tripathi, 2020).

Ashwini Anand and Acharya (2021) clarify in their research that the meaning of attitude towards remote working is the commitment and drive to be productive and perform at a high level while not physically being present at one's office. The main positive effects of remote working that have been recognized is the increased flexibility this new way of working has offered which has provided a greater work-life balance, enhanced job satisfaction and job quality (Babapour Chafi, Hultberg & Bozic Yams, 2022; Kelliher & Anderson, 2008). Although the attitudes have mainly been positive, research shows that moving forward, people would mostly prefer remote working to be limited to only a few days a week with the possibility to physically be in the office the remaining days (Babapour Chafi, Hultberg & Bozic Yams, 2022). In turn, the attitudes towards the use of information and communications technology have been positive as it is the reason remote work is made possible (Messenger & Gschwind, 2016). However, studies also show that employees have communicated drawbacks with working from home, mainly in connection to the time in self-isolation during the COVID-19 pandemic. The social aspects of work have been negatively affected, with employees having a sense of lost comradery, increased procrastination, and ineffective communication (Wang et al. 2021).

Literature on employees' attitudes towards the information and communications technology itself used for remote working are quite limited (Martin & Omrani, 2015). Ensuring that potential users of information and communications technology possess a positive attitude is essential. It is therefore crucial that adequate research is conducted in the field of attitudes toward technology to determine the promising success information and communications technology will have in its implementation (Øyen et al. 2018). Considering the previous explanation of attitude objects, for the purpose of this thesis, multiple attitude objects are identified from the



literature. Information and communications technology are seen as an attitude object, as are virtual realities and Metaverse, and the concept of remote working.

2.3 Positive Work Environments

Creating positive work environments where individuals thrive is an essential part of ensuring business success and economic growth (Day, Kelloway & Hurrell, 2014). More and more employees are experiencing greater difficulties in finding a good work-life balance (Barrette, 2009). This is increasing the level of stress experienced at work and affects the overall well-being of employees (Fiksenbaum, 2014). Well-being is one of the major factors often discussed in literature when referencing a positive work environment, the other one being productivity (Fiksenbaum, 2014; Kossek, Kalliath & Kalliath, 2012; Day, Kelloway & Hurrell, 2014). In establishing positive work environments, maintaining high levels of work productivity is essential (Day, Kelloway & Hurrell, 2014). With the advances in technology, well-being and productivity at work are experiencing challenges and the need for up-to-date literature on the topic is only growing (Kossek, Kalliath & Kalliath, 2012).

From the literature on well-being and productivity, it becomes clear that employee attitudes play a key role in deciding whether a work environment is perceived as positive or negative. Studies such as that of Babapour Chafi, Hultberg and Bozic Yams (2022), Kelliher and Anderson (2008), and Wang et al. (2021) discuss found advantages and disadvantages of remote working as expressed by employees. These advantages and disadvantages see a clear connection to the understanding of well-being and productivity at work. Work-life balance and flexibility are one such connection that is mentioned by Carvalho and Chambel (2016) on well-being at work and by Babapour Chafi, Hultberg and Bozic Yams (2022) as a determinant of attitude toward remote working. It becomes evident from the literature that an employee's perception of their well-being and productivity at work as affected by remote working has



a direct impact on one's attitude towards the new way of working and, hence, its associated information and communications technology. In depth discussion on well-being and productivity is provided below to better demonstrate its connection to attitudes.

2.3.1 Well-Being

With people spending a significant part of their lives at work, it is important to consider individuals' well-being in their work environments (Bartels, Peterson & Reina, 2019; Briner & Walshe, 2015). Since the use of new technology was first introduced into the workplace, the very nature of how work is carried out has seen a big change and has therefore been a major readjustment for many (Sparks, Faragher & Cooper, 2001). Research has followed this workplace development throughout the years to comprehend the effect on employee well-being (Danna & Griffin, 1999; Sparks, Faragher & Cooper, 2001; Chen & Cooper, 2014). In understanding the underlying definition of well-being, researchers have recognized two different views of the term. One refers to well-being as having pleasant feelings and the other suggests that one's involvement in self-actualizing behavior leads to well-being (Ryan & Deci, 2001; Ryff & Singer, 2008).

Other researchers provide a deeper connection between different factors and employees' well-being, such as Sparks, Faragher and Cooper (2001) relating well-being to job insecurity, work hours, and control at work, and Carvalho and Chambel (2016) referencing work-family balance. Although the particularities of well-being may differ across studies, having knowledge of well-being at work is fundamental as it has a direct effect on employees' mental and physical health and therefore has an impact on the level of work performance (Chen & Cooper, 2014; Ogbonnaya & Messersmith, 2017). With the continuing development of technology, Baumeister et al. (2021) have additionally identified a lack of research on the work-related use of information and communications technology and its relationship to employee



well-being by suggesting that its outcomes are largely diverse and therefore difficult to draw conclusions from. While the use of information and communications technology may increase the well-being of some by providing higher flexibility, the constant connectivity may decrease the well-being of others, which indicates a need to better understand the impact new information and communications technology will have on employee well-being (Gadeyne et al. 2018; Baumeister et al. 2021).

2.3.2 Productivity

Researchers on the topic of employee productivity are unified on its importance for organizational success (Nda & Fard, 2013; Marinova, Ye & Singh, 2008). Nda and Fard (2013) further emphasizes the role human capital has in gaining competitive advantage and in distinguishing a good organization from a great one. Establishing a work environment that enhances work productivity is therefore crucial (Niemelä et al. 2002). Employee productivity considers a worker's efficiency and effectiveness during working hours (Bhatti & Qureshi, 2007). Employee productivity has fluctuated during the course of the COVID-19 pandemic, with research acknowledging social isolation and family-work conflict being sources of decreased work productivity (Galanti et al. 2021) while others find remote work to enhance productivity (George et al. 2021).

Palvalin, Lönnqvist and Vuolle (2013) summarized the benefits information and communications technology have on work productivity, by listing activities such as improved real-time communication, better access to information, and less time spent on each individual task. Hence, being more efficient and effective in one's work, allows employees to make better use of their working hours. Elsaadani (2014) recognized that there is a need to improve employee productivity through the use of different information and communications technologies as the pursuit of becoming a highly efficient and effective organization is dependent on investment in information and



communications technology. Productivity in connection to information and communications technology has mainly been referred to as the implementation of automation systems in offices (Elsaadani, 2014). Other research uses the newer developments of information and communications technology to create different virtual environments in which an employee works in to compare productivity (Latini et al. 2021). However, employees' own use of virtual realities in their daily work and their following effect on productivity have not yet been studied.

2.4 Technology Acceptance Model (TAM)

As technology has developed and its use has become available in people's everyday life, user acceptance of technology has been an important field of study (Chuttur, 2009). The most commonly used model for this purpose is that of Davis (1985) who introduced the technology acceptance model (TAM) to understand users' processes toward the acceptance of new technology. The model Davis (1985) constructed is seen in figure 2. The overarching element of the model in which a decision is taken on whether or not a technology is used is a potential user's overall attitude towards using technology, referred to as the affective response. In turn, a user's attitude is based on two separate cognitive responses: perceived usefulness and perceived ease of use (Davis, 1985). Perceived usefulness refers to the added value the technology would bring to one's work performance, while perceived ease of use is the extent to which the use of technology is effortless (Scherer, Siddiq & Tondeur, 2019). Davis (1985) further suggests that perceived ease of use has a causal effect on perceived usefulness, implying that a potential user's perception of the ease of use of technology affects the level of usefulness the technology has. However, the relationship is not seen as two-sided as perceived usefulness is not believed to have an effect on perceived ease of use. The design features in the model are viewed as external factors with a direct effect on perceived ease of use and perceived usefulness and in turn an indirect effect on attitude or behavior.



Behavioral response on the opposite side simply refers to the actual use of a technology (Davis, 1985).

TAM has been used as a basic model by researchers who have altered it into new versions, such as the unified theory of acceptance and use of technology (UTAUT) (Escobar-Rodríguez & Carvajal-Trujillo, 2014) and the virtual reality hardware acceptance model (VR-HAM) (Manis & Choi, 2019). Many different variations and extensions of the model can be found due to the model's transferability to various contexts and research directions (King & He, 2006). Hence, adding variables to the original technology acceptance model is simple with Manis and Choi (2019) for instance adding variables such as age, past use, and curiosity and their relations to perceived ease of use and perceived usefulness to their extended version. Literature displays a wide application area of the technology acceptance model, however, mainly across the field of education as can be seen in the study by Manis and Choi (2019), Scherer, Siddiq and Tondeur, (2019), and Martono et al. (2020).

The TAM provides an understanding to users processes toward the acceptance of new technology on an individual level (Davis, 1985), which aligns with Cooper, Crano and Forgas' (2010) implication about attitudes being an individualistic notion rather than collective. Considering the two pillar stones of the TAM, perceived usefulness and perceived ease of use, these can further be seen to have a direct link to an individual's well-being and productivity at a workplace. As usefulness and ease of use are about the added value technology brings to one's work performance and to what extent it is effortless (Davis, 1985), this suggests that, for example, an individual's improvement in the work-life balance due to new technology results in a positive attitude towards its use. If the use of the technology is perceived as effortless it would further improve one's productivity and well-being, creating a less stressful environment, hence, suggesting that perceived usefulness and perceived ease of use has a direct impact on attitude, per the discussions on stress at the workplace by Fiksenbaum (2014).

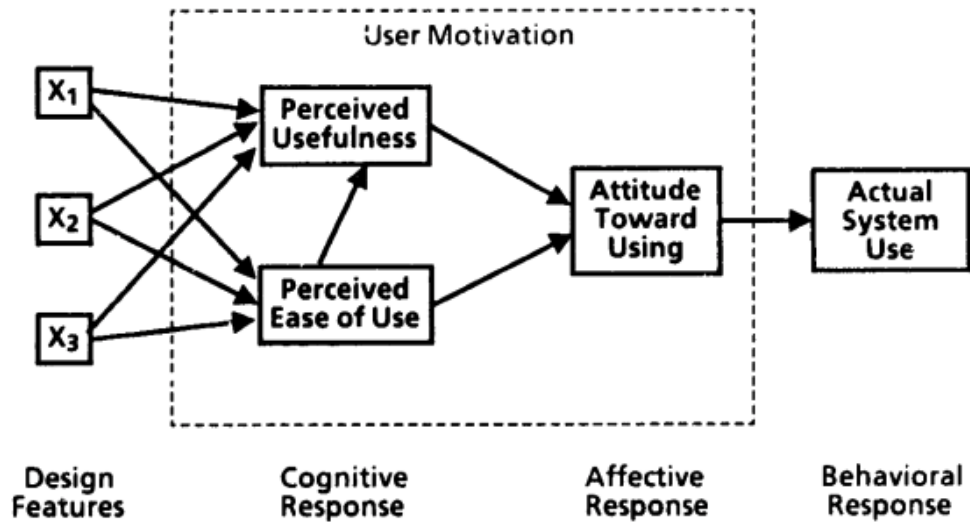


Figure 2: Technology Acceptance Model (Davis, 1985).

2.5 Importance of Support from Management in Organizational Change

With new technologies entering the workplace, new expectations and demands are constantly placed on employees to successfully adapt to their implementations (Lilly & Durr, 2012). While the technology acceptance model considers the individual's attitude toward new technology based on perceived usefulness and perceived ease of use (Davis, 1985), another part of the literature further highlights the role of leadership to ensure successful technology implementation (Lilly & Durr, 2012; Van Wart et al. 2017). The role of leadership in ensuring successful organizational change, has already been touched upon in earlier sections and the authors, therefore, identified it as having an essential role. There is a need for leaders in organizations to acquire knowledge on when and how to adopt new technologies, and how to ensure these are implemented successfully (Van Wart et al. 2017). While current literature, such as that of Van Wart et al. (2017), is mainly focused on



the need for leaders themselves to understand the works of new technology prior to its implementation in organizations, understanding employees' need for management support is just as crucial (Strauss, Griffin & Rafferty, 2009). Through researching the literature, the authors of this paper recognize that the perceived support of one's management has an implicit relation to an employee's individual attitudes which in turn also affect the perception of a positive work environment. Different types of leadership exist and have been discussed throughout research, with transformational leadership taking a dominant stance since the 1980s (Hoch et al. 2016).

Research has shown that transformational leadership has an effect on employees' attitudes toward change occurring in an organization. The leadership style suggests that leaders hold the power of creating a positive vision around an upcoming change that is worth pursuing and therefore has a direct impact on employee attitudes that determines the outcome of that change (Faupel & Süß, 2019). While transformational leadership places emphasis on collective values and considers the effectiveness of an organization as a whole, other forms of leadership have surfaced to see to the individual's values and needs instead. Servant leadership is one such type of leadership that deeply dives into the individual's needs and provides one-to-one communication to guide employees through their work and overall potential (van Dierendonck et al. 2014). While different leadership styles discuss various levels of support and focus points, literature is united on the influence leadership has on successful implementation of innovations in organizations, hence, displaying the importance of management support in innovation implementation (Michaelis, Stegmaier & Sonntag, 2010). Furthermore, research has shown that management support for innovation implementation is a strong contributing factor to the likelihood of successful implementation. It is argued that in the absence of strong, convincing, informed, and demonstrable management support, employees are more likely to dismiss an innovation or change in an organization (Klein & Knight, 2005).



2.5.1 Change Management

Change is inevitable, and with the ongoing development of technology, change happens often and on large scales (Schulz-Knappe, Koch & Beckert, 2019). The term change management has been established to refer to the abilities and skills of management to proactively identify and manage changes that occur and take place within one's work (Baca, 2005).

“Organizational change management refers to planning, organizing, leading and controlling a change process in an organization to improve its performance and achieve the predetermined sets of strategic objectives”
(Ha, 2014, p. 1).

In the literature on successfully implementing and managing organizational change, establishing good communication processes is gaining a lot of attention and is agreed upon to have a vital role (Ha, 2014; Elving, 2006). It is argued that one's ability to change the behavior of individual employee's decides on the effect of one's change efforts. With the organizational change that intends to change how employees perform their work tasks and, hence, introduce new ways of working, it is imperative that communication about that change takes place with the employees that it affects (Elving, 2006). The reason communication is seen as such a vital component in organizational change is due to its ability to reduce resistance to change from employees. By communicating insufficient and incomplete information about a change to the employees who the change affects, it can lead to strong resistance among those employees (Schulz-Knappe, Koch & Beckert, 2019).

Besides communication, literature has further identified two more perspectives that decide on whether or not an employee supports a change, these are personality traits and the relationship between the employee and the organization. Personality traits consider an individual's attitude towards life as a whole, whether a person is skeptical or has higher levels of self-efficacy. A skeptical person is more likely to resist a change. The relationship between the



employee and the organization is dependent on trust as a variable, simply considering if trust exists between the two (Dubrin & Ireland, 1993; Eby et al. 2000; Judge et al. 1999). Furthermore, while there may be a number of different reasons why the implementation of an organizational change is unsuccessful, it is important to recognize that one reason may simply be that the change is unnecessary (Schulz-Knappe, Koch & Beckert, 2019).

2.6 Model Describing the Theoretical Relationships

The authors have constructed the following model, see figure 3, to visualize the relationships between the theories previously identified and discussed from literature. The model constructed uses the technology acceptance model as a base, implying that the notions of perceived usefulness and perceived ease of use still are the pillar stones deciding an individual's attitude towards the use of new technology as recognized from all literature on the different topics presented. Different colors have been used to facilitate the reader's understanding of the model. Each color refers to a specific section, i.e heading, previously discussed. The features of the technology acceptance model are communicated in the color blue, showing the previous relationships between perceived usefulness, perceived ease of use, and its effect on attitude and behavior as identified by Davis (1985). From 'Attitude Towards Using' the color green indicates the attitude objects as identified for the purpose of this thesis, following along Cooper, Crano and Forgas' (2010) definition of what attitudes are, the authors find it important to clarify which attitude objects are referred to in the research. The attitude objects, information and communication technologies, virtual reality, Metaverse, and remote working are connected in a circle to visually indicate how they are intertwined and seen as one.

Moving to the top left corner of the constructed model, the color purple indicates the literature on management support and change management. The three perspectives identified to have the most effect on the success and failure



of change management, that is communication, employee and organization relationship, and personality trait ((Dubrin & Ireland, 1993; Eby et al. 2000; Judge et al. 1999), are recognized to be the bases of understanding the importance of employee's needing support from management in organizational change. The literature argues that support from management has a direct impact on an employee's perception of a positive work environment, which has been discussed on two main themes, well-being and productivity. As stated by Day, Kelloway and Hurrell (2014), it is essential to create positive work environments where individuals thrive to ensure business success, the literature on leadership styles strengthens that statement. Hence, a purple arrow is linked to positive work environments. With Van Wart et al. (2017) arguing that there is a need for leaders in organizations to acquire knowledge on when and how to adopt new technologies, and how to ensure these are implemented successfully, a direct link to an individual's perception of usefulness and ease of use of new technologies can be seen, therefore including two direct purple lines towards the two notions.

Finally, positive work environments are visualized in the color orange. Positive work environments are suggested to have a large impact on an individual's attitudes, by itself, through the level of support from management, and through the perceptions of usefulness and ease of use. The literature on employee's attitudes toward remote working, as discussed by researchers such as Babapour Chafi, Hultberg & Bozic Yams, (2022), Messenger & Gschwind, (2016), and Wang et al. (2021) acts as the guiding knowledge for understanding the topic of this thesis, hence, it has not been more deeply indicated in the model as the information is the overarching knowledge driving the outcome of the constructed model.

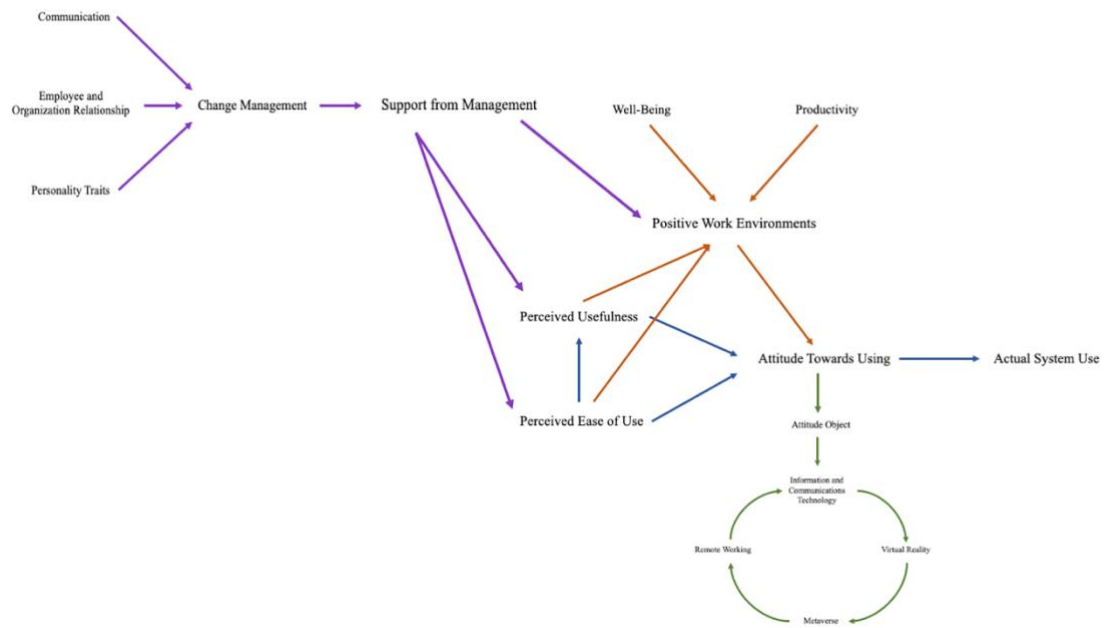


Figure 3: Model describing the theoretical relationships (own source)



3 Methodology

In this chapter, the methodology chosen throughout this research is presented and justified, including the research philosophy, research design and the methods used for collecting empirical data.

3.1 Research Philosophy

A research philosophy can be explained as a term related to the advancement of knowledge as well as the nature of knowledge. The research philosophy chosen involves presumptions of the way the researcher views the world and will underline the research strategy as well as the methods that one decides upon as a part of that strategy (Saunders et al. 2009). Two research philosophies that are commonly discussed within business research are epistemology and ontology. Epistemology can be explained as concerning what is seen as acceptable knowledge within a research area and different methods of gaining knowledge, while ontology is referring to the nature of reality or truth and focuses on the researcher's presumptions of how the world operates. The research philosophy chosen will act as a basis of one's approach to a research question (Bryman & Bell, 2015; Saunders et al. 2009).

According to Bryman and Bell (2015), the ontological perspective is commonly used when looking at organizations or cultures as objective social entities, which act on individuals. Furthermore, since this study focuses on understanding employees' attitudes towards the use of virtual realities for remote working, the ontological perspective was deemed most suitable in regard to the ontological perspective to be explained as a way for the researcher to underline an organization's structure, or the members' values and beliefs (Bryman & Bell, 2015; Saunders et al. 2009). When studying an organization or management, it is common to take an ontological position of constructionism and objectivism (Bryman & Bell, 2015). Which is why these positions have been used within this study, in connection to the purpose and



research questions. Constructionism is a position that means that social existence appears external to social actors in reality and that social interaction is constantly in a state of revision, while objectivism means that the social phenomena and the meaning of them exist separate from social actors (Bryman & Bell, 2015; Saunders et al. 2009), which are the positions that underlined the research strategy and methods of this thesis.

3.2 Research Design

Bryman and Bell (2015) explained research designs as a method to develop a framework for the collection, as well as analysis, of data. The choice of research design depends on the researcher's aim with the study. Furthermore, the research design is connected to the principles designed when evaluating business research. The research design should therefore be suitable to the principles designed for the study, as well as the research questions designed for the study (Bryman & Bell, 2015). The purpose of this study has been to explore attitudes towards the use of virtual realities, using the development of Metaverse as a reference point, for remote working in the case of employees. The aim was further to provide an understanding of what organizations need to consider following the increased use of virtual realities. The research design chosen for this study has therefore been carefully considered suitable depending on the aim of this research.

3.2.1 Case Study

A case study according to Bryman and Bell (2015) contains a detailed analysis of a case and is a common and broadly used research design. The research design can be used to analyze an organization, person, location, or event. A case study is commonly used when analyzing an organization or a workplace with the aim of researching how the organization or workplace is functioning (Bryman & Bell, 2015; Gillham, 2000; Saunders et al. 2009). Furthermore, when planning for conducting a case study, it is of importance that the case



study is suitable to the research questions that are of interest to the researcher (Bryman & Bell, 2015; Simons, 2009). It is common that the research questions are formed as, but not restricted to, “Why” or “How” questions for a case study, where you have a specific case in focus (Simons, 2009).

A case study can be conducted in the form of one single case or multiple cases (Bryman & Bell, 2015), where this study will focus on exploring one phenomenon (Metaverse) with several organizations. Using the multiple-case study design has become more common in research to be able to explore several cases at the same time. Additionally, it makes it possible for researchers to contrast and compare data collected from each case (Bryman & Bell, 2015; Saunders et al. 2009), which for this study are different organizations. The research design of a multiple case study was chosen for this research due to the aim of analyzing the virtual reality Metaverse with employees within organizations. The multiple case study gave the authors the opportunity to deeply analyze several organizations, explore how digital tools are used in these organizations and how to adapt to an increase in virtual realities. This research design was chosen in order to have the ability to generalize the findings and collect a broader amount of empirical data. Additionally, the research design of a multiple case study was seen as suitable for the developed research questions and purpose of this study.

3.3 Research Approach

The deductive approach derives from the existing literature according to Bryman and Bell (2015) and then a hypothesis can be developed. Researchers then collect data that confirms the hypothesis or not. The deductive theory is a common approach when researching the relation between theory and research (Saunders et al. 2009). With an inductive approach, an opposite approach to deduction, the researcher begins by collecting data, and the theory is developed accordingly (Bryman & Bell, 2015; Saunders et al. 2009). The abductive approach, just like induction, begins with empirical observations



and has the aim of developing a theory, which is different from a deductive approach where the researcher tests or evaluates the theory. As a primary goal though, the abductive approach aims at developing an understanding of a phenomenon (Kovács & Spens, 2005). Since this research aims at developing an understanding of a fairly new phenomenon, by conducting a multiple case study, an abductive approach has been chosen. The reason for choosing this approach is due to the fact that it will provide the researchers with a deeper understanding of the research area. By this approach, the researchers will be able to work in a flexible way and develop an understanding of attitudes toward virtual realities and how the organizations in Sweden can adapt to it, by being able to go back and forth in gathering data and theory until the aim has been reached.

3.4 Qualitative Data Collection

According to Bryman and Bell (2015) qualitative research concerns words rather than analyzing numbers as in quantitative research. The qualitative research method is derived from an inductive approach, moving from collecting data into theory, but also applicable when taking an abductive approach. Qualitative research is widely used when conducting research that contains interviews or observations to understand the social world, behaviors, and interpretations. The qualitative approach is a widely used approach for a case study since it is common to explore the case with help of observations, and semi-structured or unstructured interviews (Bryman & Bell, 2015; Saunders et al. 2009).

It is common for researchers to develop theory and categorization from the data collected and analyzed in qualitative research, additionally, the qualitative research method gives the researchers the opportunity to look deep into a problem or research area and create an understanding of the social world, attitudes, or behavior (Bryman & Bell, 2015; Saunders et al. 2009). This study followed a qualitative method of collecting and analyzing data. In order to



reach the purpose of this study and answer the research questions, a qualitative research approach was deemed appropriate for this study, also to understand the “what” and “how” aspects of the use of virtual realities in remote working. Since this study had a focus on understanding attitudes towards virtual realities for remote working, a qualitative approach was seen as suitable for this research, where the authors were able to collect a large amount of data to deeply understand the phenomena. Additionally, within this study, interviews were conducted, which was deemed suitable with a qualitative research method. Interviews were conducted with employees within organizations in order to gain a deep understanding of their attitudes toward virtual realities for remote working, as well as an understanding of the way they are currently working within their organizations. Additionally, this research focused on exploring how organizations can adapt to the increased use of virtual realities moving forward.

3.4.1 Primary and Secondary Data

Primary data can be described as data collected firsthand by the researchers. This data can be collected through interviews, observations, or surveys. Primary data is therefore data that is collected and analyzed by the researcher (Bryman & Bell, 2015). In contrast to primary data, secondary data can be described as data that has already been collected by other researchers which you can use for your own research. This data can be in the form of articles, literature, or websites. When collecting data, it is important to examine the data to see if it is accurate, valid, reliable, unbiased, and that it is relevant for the researcher to use (Bryman & Bell, 2015; Rabiński, 2003). For this study, primary and secondary data have been collected. For the theoretical framework, secondary data such as scientific articles and literature have been used. The secondary data has been collected through databases such as Business Source Premier and Google Scholar, looking for data of scientific nature which was peer-reviewed. The data collected for the empirical research has been done through interviews, which is the primary data collected by the



researchers. The data collected on the topic of Metaverse in the introductory chapter is also gathered through secondary data. However, due to the lack of scientific research on the phenomenon as it has only recently increased substantially in popularity and scientific research is yet to be conducted on the topic to a greater extent, the data has been collected through online news articles instead.

3.4.2 Source Criticism

To get a good understanding of the literature and get a good foundation for one's research it is important to critically review the data collected. This will also help the researcher to make sure that the collected data is relevant for its own study (Saunders et al. 2009). As already mentioned, the data needs to be examined to see if it is accurate, valid, reliable, and unbiased (Bryman & Bell, 2015; Rabiński, 2003). The researchers of this study have examined the collected data critically to get an understanding of the research which has already been conducted in this area. Furthermore, the data that has been collected, has been reviewed in connection with the points of being accurate, valid, reliable, unbiased, and relevant for this study. The authors of this study want to point out that the data collected on the phenomenon Metaverse includes secondary data which has been collected from a number of website articles by for example Forbes, because of the unavailability of scientific research regarding this subject. Although these sources have been reviewed and examined by the authors in the same way as the rest of the data gathered it is important to point out that they have a lower level of accuracy and reliability than that of scientific articles.

3.5 Semi-structured Interviews

Interviews are a common method within qualitative research as well as in a case study. Interviews can be conducted in several ways depending on the wanted structure and approach throughout the interview. A semi-structured



interview is commonly used when having a set number of questions that need to be answered by the interviewee, although the researcher also has space to include additional questions during the interview if needed (Bryman & Bell, 2015; Saunders et al. 2009). When conducting this type of interview, the researcher follows an interview guide where the questions are included. All questions do not have to be asked and do not have to follow a specific structure, which makes this a flexible method for the researcher (Bryman & Bell, 2015). In order to understand the attitudes towards virtual realities for remote working and explore how organizations in Sweden are functioning, interviews were conducted with a number of employees in Sweden. The interviews have been of a semi-structured nature in order to have some structure while also allowing the interviews to be flexible in the case that more questions could be asked if needed. This choice of interview structure was due to the flexibility of the process and to collect rich data in order to develop a deep understanding of the employees' attitudes, behavior, and interpretation.

3.5.1 Designing Interview Questions

Designing an interview guide can help the researcher to have some structure for the interview process. This guide should include a set of questions to which the researcher wants answers that will be of importance for understanding the subject discussed. The interview guide is commonly used when conducting semi-structured interviews due to its flexibility and gives the researchers the opportunity to understand the interviewees' views on the social world (Bryman & Bell, 2015). It is of importance that the researcher formulates the right questions for the study conducted and decides if open questions or closed questions are more suitable for the study. Open questions give the interviewee more room to answer, and explain why or how in regard to the question, while closed questions usually only need a “yes” or “no” answer (Bryman & Bell, 2015; Saunders et al. 2009). For this study, interview guides were developed (see appendix 1 and 2) in order to have some structure to the interviews and get answers to important questions for the understanding of this study.



Additionally, it was important for this study to use mostly open questions since the focus was to get a deep understanding of the attitudes among the interviewees. Open questions allowed the interviewees to explain more in detail and give the researchers deep data regarding the subject.

3.5.2 Interview Sampling

In qualitative research, it is common to use purposive sampling in some matters. This sampling method can be explained as a non-probability sample, which means that the participants for interviews are not randomly selected. Because the sample selection is a non-probability approach, it also means that the researchers cannot generalize the data to a population. Purposive sampling is usually used when researching a specific case and one collects interviewees within that specific area. This is done in order to make sure that one has suitable interviewees for the study conducted (Bryman & Bell, 2015; Saunders et al. 2009). Purposive sampling was used throughout this research in order to get the right information from individuals that suited this specific case. Interviewees were selected depending on the relevance to this study, which is employees within organizations in Sweden, with the aim of fulfilling the purpose of this study. The choice of sampling employees from organizations in Sweden was made due to the availability of contact with organizations that are located in the same country. The interviewees selected can be seen in Table 1.



Respondent	Company	Position	Duration	Date
Respondent 1	Södra	Infrastructure/architect within IT	31:28	16/3
Respondent 2	HL Design	Account Manager	17:12	17/3
Respondent 3	Växjö Kommun	Business Developer	30:57	21/3
Respondent 4 & Respondent 5	IV Produkt	Human Resources	29:55	22/3
Respondent 6	IKEA of Sweden	Competence & Learning Leader / Range & Product Development	28:08	23/3
Respondent 7	Stratega Media	Digital Marketing	27:28	23/3
Respondent 8	IKEA of Sweden	Digital Development Manager	25:32	24/3
Respondent 9	IKEA of Sweden	3D Developer	40:21	25/3
Respondent 10	Brandstedt	Founder (Web agency)	21:41	25/3
Respondent 11	Gimic	Founder (Autonomous visual inspection)	18:18	28/3

Table 1: List of interviewees

Furthermore, the authors were aiming for theoretical saturation, rather than deciding upon a specific number of interviews to be conducted, as suggested by Bryman and Bell, (2015) and Graneheim et al. (2017), for qualitative content analysis. When theoretical saturation was reached, the authors could go further into coding and analyze the gathered data.

3.5.3 Operationalization

An operationalization has been used to break down concepts that are of interest to the study conducted. This is often called an operational definition, which is made in order to determine a measure of the concepts (Bryman & Bell, 2015; Saunders et al. 2009). To determine the measure of a concept, one will need



an indicator that stands for the concept, which can be through questions, recordings, official statistics, or mass media content. An operationalization has been used to develop questions for interviews in order to make sure that all parts of the theory are connected to the questions one will be asking (Bryman & Bell, 2015). Within this study, a table of operationalization was developed to get a good structure of the concepts presented in the theoretical framework, connected to the questions asked to the interviewees (see appendix 3).

3.6 Conducting Interviews

For this study, interviews have been conducted in a semi-structured nature. The interviewees who were selected by purposive sampling were found in different organizations in Sweden and contacted through email or phone calls. Before conducting the interviews, the interviewees were informed about the purpose of the study, the topic that was going to be discussed, and how the gathered data from the interviews were going to be used. All interviews were conducted through digital means because of flexibility and availability to the respondents. Furthermore, their consent to be recorded was needed as well as the consent to use some personal information such as position within the organization. The authors of this study could see that many of the interviewees were unsure about including their names in the study and therefore decided to exclude all the respondents' names but include the positions and organizations. The interviews lasted between 17-40 minutes, and the authors of this thesis further want to point out that one of the interviews included two respondents at one time, which was the interview conducted with IV Produkt. This was due to the respondent's preference, but the two respondents of this interview were able to respond to all questions individually.

The ethical principles presented above have been followed as it was of importance for the authors to make the interviewees feel safe and comfortable participating in this research. The questions used have mainly been open questions to get as deep discussions and data as possible from the interviewees.



The authors have further included follow-up questions if needed. During the interview, a video was shown that explained Metaverse to the interviewees since this is a new phenomenon that many people do not have knowledge of to make sure all interviewees had the same idea of what Metaverse could potentially be and how it could be used in the workplace. A link to the video can be found together with the interview guides in appendix 1 and 2. Since this study is conducted in English, the interview guides were developed both in English and Swedish. The interviewees were asked beforehand if they wanted to do the interview in English or Swedish depending on what they felt comfortable with. Most of the interviews were conducted in English except for one interview that was conducted in Swedish due to the participant being more comfortable with doing the interview in their own language. This interview was therefore transcribed and translated into English afterward by the authors of the study.

A pilot interview was conducted by the authors in order to make sure that the interview guide worked in a good way, that all questions were understandable, but also to see if the questions asked could be answered in connection to the purpose and research questions of this study, additionally to make sure that all questions covered the theoretical framework. The pilot interview was conducted with an interviewee employed at Växjö Municipality, also chosen by purposive sampling. After the interview, the interview guide was revised and improved to have a better connection between questions and the theoretical framework in order to fulfill the purpose of this study. All interviews were recorded and transcribed in order to be analyzed afterward and identify codes and categories within the transcripts.

3.7 Analysis of Qualitative Data

For semi-structured data, it is common to use a method of analysis such as content analysis. Content analysis can be described as a method to determine



different themes, codes, or concepts by analyzing texts or documents (Bryman & Bell, 2015).

The method of qualitative content analysis is used to analyze data of qualitative matter, such as interviews. This method becomes applicable to unstructured and semi-structured data given from transcripts of interviews and case studies of organizations. The method has focused on context and subject and aims at understanding the differences and similarities found within a text (Bryman & Bell, 2015). This method has long been seen as primarily an analytical tool in qualitative research, although it can now be described as an independent method on its own. Since content analysis underlines the variety in content, it is important to gather enough data which can be analyzed. Therefore, when using qualitative content analysis, one should not decide beforehand how many interviews should be conducted, but rather search for theoretical saturation.

The result of the content analysis should be presented in themes and/or categories that are developed through coding. The researchers develop codes early in the process of analysis to identify categories, which then can be further broken down into subcategories (Bryman & Bell, 2015; Graneheim et al. 2017). Content analysis and coding have been used in this study to analyze the gathered data and break it down into categories in an efficient way. This way of analyzing was seen as suitable for this study to get a good structure of the broad amount of data collected. This was done to create new categories which would help to get a deeper understanding of the data. The coding has been done with help of the program Nvivo. With Nvivo, the researchers could upload all data collected and analyze it in order to find different codes. These codes have then been designed into categories which, in turn, could be analyzed and discussed in separate chapters. The process of coding is seen in table 3.



Category	Items
Attitudes	Calm, attitude, experience, excitement, eyesight, free, interesting, skeptical, careful, reaction, curious, frustrations, comfortable, safe, fun, control, cool, resistance
Communication	Contact, conversation, communication, interaction, forums, cohesion, social, appreciated, generation/maturity, reasoning, sharing, team, collaborate, included, connection
Reassurance/Motivation	Cost, expenses, barrier, money, health, security, environment, privacy, safety, reassurance, trust
Workplace	Conference, workshops, presentations, projects, rooms, office, meetings
Management Support	Rules, updated, equipment, tools, combine/combination, application, build, information, training, contribute, explaining, value, useful, benefits, clear, test, examine, explore, support, help, education, learning, understanding, knowledge, adapt
Productivity	Skills, deliver, responsibilities, results, focus, production, decisions, ideas, creativity, solutions, spontaneous, efficient, level, opportunities, future, change, function/functionality, productivity
Technologies	Science, games, avatars, technical, visual, website, design, virtual, physical, digital
Flexibility	Commute, distance, schedule, process, save/saving, flexible, traveling, time

Table 3: Coding outcome

The coding presented a large number of words extracted from the transcribed interviews. These words were viewed, analyzed, and placed into eight categories based on their similarities and found relation to each other. From these eight categories, three main themes were identified that formed the analysis chapter. Attitudes, technologies, and flexibility was placed under the heading ‘Working with Technology’, motivation/reassurance, workplace, and productivity under ‘Secure or Improve a Work Environment’, while



communication and management support fell under ‘Good Communication is Key’. These headings have been developed by the authors of this paper as found to best describe the underlying categories and are presented under the analysis chapter.

3.8 Criterias of Business Research

According to Bryman and Bell, (2015) there are three main criteria that are used in business and management research for evaluation. These are reliability, replication, and validity. Although, both reliability and validity are mostly concerned with the sufficiency of measures, which are connected to quantitative research and not qualitative, which makes it irrelevant in this case. Other ways of evaluating qualitative research have been described as including (Bryman & Bell, 2015);

- Credibility
- Transferability
- Dependability
- Confirmability

The criteria of credibility has to do with how accurate and believable the findings are, which also can be said to be a parallel to internal validity which is more applicable to quantitative research. Transferability can be explained as a parallel to external validity and has to do with if the findings apply to other contexts. Dependability has to do with the findings being likely to apply more times than in this study, which also can be said to be parallel to the quantitative criteria reliability. The last criterion, confirmability, look at if the researcher has included their own values to a high level in the research (Bryman & Bell, 2015; Saunders et al. 2009). This study will follow the criteria of credibility, transferability, dependability, and confirmability by developing findings that are accurate and valid. When it comes to transferability and dependability, the researchers will take into consideration if this study could be applicable to



other contexts and at more times, than being researched for this study. Furthermore, in connection with confirmability, the authors of this study will not include any own values or opinions within this study, instead, the study will rely on the gathered data through theories and the respondents within the interviews conducted.

3.9 Ethical considerations

Within business research there are ethical issues that need to be considered when conducting the research (Bryman & Bell, 2015; Saunders et al. 2009). There are four primary principles that researchers specifically should be aware of, which are; *no harm should come to the participant, need for informed consent, privacy invasion, and deception* (Bryman & Bell, 2015).

Issues involving harm can come in several ways. It is important that the researcher makes the participant feel safe when for example conducting an interview. Researchers need to make sure that no harm comes to the participant in the form of physical harm, self-esteem, stress, or employment. Any possible harm should be minimized by the researcher, by creating an environment for the participant that will make them feel safe and comfortable (Bryman & Bell, 2015; Saunders et al. 2009). The need for informed consent has to do with the amount of information given to the participant. It is important that the participant is given enough information about the nature and purpose of the study to be able to decide whether or not to participate in the study. It is of importance that the participant feels comfortable with being involved in the study, both for ethical issues and to be sure that the gathered data will be valid (Bryman & Bell, 2015).

Another ethical issue is related to the invasion of privacy, which means that researchers should be sure to not intrude on the participant's privacy or disregard an individual's respect and values. It is an issue for researchers to know beforehand which topics or questions can be sensitive to the participant,



which is why it is of importance that the researcher deal with every interview in a sensitive way and gives the participant the chance to withdraw from involvement in the study if needed (Bryman & Bell, 2015; Saunders et al. 2009). Furthermore, the researcher needs to give the participant the option of being anonymous and keeping personal information confidential. Since some topics may be sensitive to the participant, it might be more comfortable and safer if having the choice of responding anonymously.

The final issue is regarding deception which means that the researcher is not true to what the research concerns, the participants are not correctly informed of what he/she is involved with, and important information is left out. This can also be connected to if the participant is recorded during an interview, which is why it is of importance to inform and ask the participant for their consent to document or record any interviews (Bryman & Bell, 2015). For this study, it was of importance to the authors that every interviewee felt comfortable and safe to be involved, therefore these four principles of ethical issues have been followed throughout the study. Before each interview, the participant has been informed of the study, what the purpose of the study is and how their contribution would be included. Furthermore, every interviewee has been asked for their consent to be recorded and has also been given the opportunity to be anonymous, to avoid ethical issues.



4 Empirical Data

In this section, the data collected through interviews will be presented. The data is presented under the same headings introduced under the theoretical framework chapter, as well as the same structure as the operationalization, to facilitate the readers' understanding of the content. Each section ends with a summary of what has been discussed, highlighting the main outcomes by the respondents on the different topics.

4.1 Information and Communications Technology

The interviewees were asked how they carry out their work today, in which it could be seen that all participants worked remotely to some extent. Two to three days, or 60% at the office and 40% at home, was the most common answer expressed among the six interviewees who said that they currently work hybrid. The other four interviewees carry out most of their work physically in their office, although they do engage in online meetings, i.e., some form of remote work, while being at the office. Respondent 3¹ clarified that although one is physically in the office most days of the week, around 60-70% of one's work is still carried out through digital solutions which is also mentioned by respondent 2² who only work from the office but carry out about 70% of meetings with external clients online through the use of information and communications technology.

When discussing the current information and communications technology tool used in remote working, a positive perception could be seen throughout the answers of the respondents. Respondent 5³ expressed that there have not been any major problems with the technologies used, however, as discussed by all of the other respondents as well, there was a learning curve which might have

¹ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

² Account Manager at HL Design, Digital Interview, 2022-03-17

³ Human Resource at IV Produkt, Digital Interview, 2022-03-22



taken a longer time for some people in comparison to others. Respondents 2⁴, 4⁵ and 5⁶ discussed the struggle with using and learning the tools when the abrupt change to remote working came due to the pandemic, this was mostly seen among the smaller companies. It was explained by these individuals that it took some time to learn the functions and how to create effective meetings online, although this was also said to become much better with time.

“For me it wasn't really an issue getting into zoom teams, Google meet, Slack, Skype (...) The bridge or the gap you need to bridge is when there's people that aren't as experienced.”⁷

As respondent 2⁸ communicated it, when engaging in meetings with clients “on the traditional side”, meaning those of a higher age who are used to a certain way of working, it is more likely that smaller connectivity problems occur, but it does not affect the outcome of the meeting per se at the end. Overall, the respondents were positive about the tools used within their work, such as Zoom, Google Meet, and Microsoft Teams, which varied depending on the organization.

In continuing the discussion on the use of information and communications technology, respondents were asked about the tool of virtual realities for remote work and here one could see a difference between the answers among the interviewees. All interviewees had some knowledge of what virtual realities are, although the extent of their knowledge varied. Some of the participants had more knowledge than others in this matter and virtual realities were mostly mentioned as a connection to gaming and not as much connected to its potential use for remote working in their organization. Respondent 7⁹ has for instance had the opportunity to try on a virtual reality headset while playing

⁴ Account Manager at HL Design, Digital Interview, 2022-03-17

⁵ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁶ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁷ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁸ Account Manager at HL Design, Digital Interview, 2022-03-17

⁹ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23



video games, although saying that the experience lacked technological advancement, mentioning that there might be better options out there. Respondents 3¹⁰ and 6¹¹ on the other hand, discussed their encounters with virtual realities in their job, with respondent 6¹² clarifying how their organization is seeing its potential in product development to enhance the customer experience by offering opportunities to test products together and more easily make purchasing decisions. In another example, respondent 3 said her knowledge of virtual realities was related to its use in the construction of apartments and buildings, and how one can see what is to be before it has been built. Furthermore, continuing along the lines of respondent 7¹³ who was one of the more familiar one's with virtual realities, the possibilities of virtual realities were identified:

“I have been in the business for a while and even in the beginning we talk about VR, so I am very familiar with it. I have even used it in some cases. Business-wise, we talk a lot about possibilities with VR and AR, it is very interesting”¹⁴

When being asked about Metaverse, most of the interviewees were not familiar with the phenomenon. Only a few of the interviewees, such as respondents 1¹⁵ and 9¹⁶ had broader knowledge of what Metaverse entails but still, it had not been discussed connected to their workplace in any way. Some of the participants could connect the phenomenon to Facebook, but not more than that the name was connected to the company. For respondents 3¹⁷ and 6¹⁸, Metaverse was something they had never heard of before, while for

¹⁰ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

¹¹ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹² Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹³ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

¹⁴ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

¹⁵ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-1

¹⁶ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

¹⁷ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

¹⁸ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23



respondents 2¹⁹ and 8²⁰ they are aware of the concept and have discussed around it as being an interesting idea as can be seen in the following quotes when asked if the implementation of Metaverse at one's workplace has been discussed in any way;

"I would say no mention, made fun of a bit as something in the future, but not, in any serious use, plans." 21

"No, like not in the sense of wanting to implement it or using it as like a working tool (...) Interesting idea, but nothing more than that." 22

Respondent 1²³ who had broader knowledge of Metaverse provide the following quote on how it is currently discussed in relation to the company that the interviewee works for and explained that;

"This is a very interesting topic and we have talked about it with Microsoft which we work close to, they have launched a lite version of their Metaverse, which I follow a lot. From a work perspective, I don't see any finished product which we can implement, but I know a bit about it." 24

The interviewees were further asked about their thoughts on Metaverse and what it could contribute to in the continuity of remote working. When discussing this, respondents 4²⁵, 5²⁶ and 6²⁷ mentioned that Metaverse would create a new level of communication. Similarities among the interviewees could be seen in which they meant that meetings, workshops, and presentations could be even more efficient with this tool, this was mentioned by for example

¹⁹ Account Manager at HL Design, Digital Interview, 2022-03-17

²⁰ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

²¹ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

²² Account Manager at HL Design, Digital Interview, 2022-03-17

²³ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

²⁴ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

²⁵ Human Resource at IV Produkt, Digital Interview, 2022-03-22

²⁶ Human Resource at IV Produkt, Digital Interview, 2022-03-22

²⁷ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23



respondents 1²⁸, 2²⁹, 4³⁰, 5³¹, 6³² and 9³³. Furthermore, many of the participants meant that with Metaverse, one would feel more included in the meetings and get a better experience when it feels like everyone is in the same place. It was also mentioned and agreed by many that Metaverse could make it easier to have efficient meetings with stakeholders that are far away, and in that way, it could also save time by not having to travel far away for business trips that are unnecessary. It was for example mentioned by Respondent 2³⁴ that;

*“I think that Metaverse could improve the things that I think are lacking right now with the digital meetings, that maybe it would feel more like everyone are in the same place and get a better interaction and working environment than we get now when working from home.”*³⁵

What respondent 2³⁶ refers to as lacking in digital meetings is the opportunities for non-work related conversations with colleagues and clients in which Metaverse could fill the gap of increasing the social interaction between people in between meetings by being as immersive as it could potentially be.

On the topic of information and communications technology for the purpose of remote working, the attitudes have mainly been positive towards the tools used. Adjustments and minor inconveniences have occurred, as expressed as an expectation when using new technology by the respondents, but in the end, it has facilitated a lot in providing more freedom to decide over one’s own time. Remote working is carried out a majority of the time according to the respondents, even though they are not physically present at their workspace, as it simplifies meetings with external parties. Although the information and

²⁸ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

²⁹ Account Manager at HL Design, Digital Interview, 2022-03-17

³⁰ Human Resource at IV Produkt, Digital Interview, 2022-03-22

³¹ Human Resource at IV Produkt, Digital Interview, 2022-03-22

³² Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

³³ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

³⁴ Account Manager at HL Design, Digital Interview, 2022-03-17

³⁵ Account Manager at HL Design, Digital Interview, 2022-03-17

³⁶ Account Manager at HL Design, Digital Interview, 2022-03-17



communications technology used for remote working are perceived as good, being physically in one's office is highly desired and communicated as something respondents do not want to lose even though remote working might be increasing. The discussions on virtual realities were varied, with respondents being aware of the concept and its many possibilities in different fields but with only a few respondents having heard of Metaverse as a possible tool used for remote working. Metaverse was, however, recognised amongst the respondents to possibly solve the issues of social isolation and comradery with colleagues if it were to be implemented at one's workplace.

4.2 Attitudes

While discussing the change to remote working because of the pandemic, and the interviewees' attitudes towards this abrupt change, many discussed that it was hard to adapt in the beginning when starting to work only from home on such a short notice. Respondent 4³⁷ expressed it in this way when asked what their initial attitudes toward remote working was;

“It was a bit awkward and unusual to go home and work remotely in the beginning. You're used to having your coffee break with your colleagues and so on, resolving things by just having a quick discussion, but it's worked well and we've had good online meetings.” ³⁸

More of the respondents, such as respondents 1³⁹ and 2⁴⁰ also mentioned that they adapted fast to this change and that remote working has worked fine during the pandemic although it initially resulted in an abrupt change in lifestyle. As respondent 1 put it when communicating that he was used to traveling quite a lot for his work, it changed to him “*just sitting at home*” because of the pandemic. Out of all the interviewees, only two expressed that

³⁷ Human Resource at IV Produkt, Digital Interview, 2022-03-22

³⁸ Human Resource at IV Produkt, Digital Interview, 2022-03-22

³⁹ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁴⁰ Account Manager at HL Design, Digital Interview, 2022-03-1



they would prefer to only work physically in the office, and out of those two one added, respondent 10⁴¹, that the opportunity to take online meetings would still be valuable but that the preference would be to carry them out from one's office. The remaining respondents would, hence, prefer a hybrid solution in the future. Respondent 7⁴² argued for a hybrid solution by saying that;

*“Because I want the option to be remote, but also go somewhere and be at an office. So it's basically just mixing it up, even if I might just end up be at the office two days every year. I still want the opportunity to be able to do that.”*⁴³

Respondent 6⁴⁴ supported this argument by explaining the reasoning behind a preference for a hybrid solution;

*“A 50 50 mix would be perfect for me. Cause then I will be able to work maybe a little bit more concentrated for home, have that flex. And then also being at the office, utilizing my network, being updated on what's happening,”*⁴⁵

From a work-life balance perspective, respondent 3⁴⁶ argued for a hybrid solution by saying that;

*“Hybrid for sure. Because sometimes I can begin my work at seven o'clock starting by doing some writing in my home and then my kids wake up and then I take them to school.”*⁴⁷

When looking at if the change to remote working had any effect on the interviewees' professional or private life respondent 7⁴⁸, as well as respondent

⁴¹ Founder (Web Agency) at Brandstedt, Digital Interview, 2022-03-25

⁴² Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

⁴³ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

⁴⁴ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

⁴⁵ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

⁴⁶ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

⁴⁷ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

⁴⁸ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23



9⁴⁹, mentioned that there are two sides to it, one good and one bad. Respondent 7⁵⁰ continues explaining that through remote work one can be more efficient in managing one's time by not having to be at a specific place at a specific time. The bad side, as argued by the same respondent, is that whether a person has a high work ethic or not, working from home does affect you and your daily routine for the worse in the end. It was mentioned by most of the participants that they felt isolated during the pandemic and missed the option of going to the office to meet their coworkers. Respondent 2⁵¹ further highlighted how remote working has made it possible to fit more meetings in one day, but at the same time resulted in the client relationships suffering a bit as the non-work-related conversations are not taking place during online meetings. Furthermore, respondents 4⁵² and 5⁵³ mentioned that their professional life got affected by the matter that small issues that could easily be solved during a coffee break or in the hallway instead needed extra meetings online and this took up more time than it should. Mostly, the participants meant that the relationship among the coworkers and the communication got affected since it became harder to communicate spontaneously and while having meetings, all focus is on work, which affected the small talk and interaction between the coworkers but also with clients and other stakeholders.

Furthermore, the participants were asked if there is something they are missing with the current information and communications technology, in which Metaverse could potentially fix or solve. When discussing this, many of the interviewees mentioned that the meetings can be even more efficient, create a better experience, and be more interactive than the current technologies. Most of the interviewees discussed the important meaning it would have to create a better environment and the feeling that everyone is in the same place even

⁴⁹ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

⁵⁰ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

⁵¹ Account Manager at HL Design, Digital Interview, 2022-03-17

⁵² Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁵³ Human Resource at IV Produkt, Digital Interview, 2022-03-22



though they are not. Respondent 3⁵⁴ highlighted the possibility to make all participants of an online meeting feel included to be an advantage that Metaverse could bring forth, where participants will not be limited by the functions of the current information and communications technology such as having to raise one's hand in order to speak, where instead the communication will be more real lifelike. This is further communicated by respondent 8⁵⁵ in the following quote;

“Exactly, at least that you don't have to, maybe that you are bit more in, the treaty where not only on the screen. And that maybe also can get the feeling of that you sit together.” ⁵⁶

The perception that Metaverse could create a more interactive work environment for employees is also argued by respondent 4⁵⁷;

“It can solve the presence of certain individuals. That it gives an illusion of presence. That you can still discuss together and show the products. That everyone who is able to, meet in the same room even though you are not in the same place. The cohesion between us, suppliers, and customers can probably be better that way.” ⁵⁸

Furthermore, with remote working increasing, respondent 1⁵⁹ adds to the discussion on the potential of Metaverse that it can help with the current issue of mixing people who work physically in an office and those working remotely into the same online meeting without creating barriers amongst the participants. Metaverse could therefore contribute to creating the same experience for all participants of a meeting no matter where they are located.

⁵⁴ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

⁵⁵ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁵⁶ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁵⁷ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁵⁸ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁵⁹ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16



“I think it's just gonna overall improve the workplace. It's gonna be a fun immersive workplace where people can just connect, be with each other in a sense and like explore it.”⁶⁰

Attitudes toward remote working are currently positive amongst the respondents as it offers opportunities to better control one's work-life balance. In the beginning, there were some difficulties adapting to the new way of working, mainly from the social perspective where one lost the more personal relationships that come from working in an office. Remote working was argued to have both positive and negative sides, with flexibility being the positive side, and the loss in daily routines and social interaction being the negative side. The main missing feature of the current information and communications technology discussed by the respondents, and believed to be improved by Metaverse, is the ability to create better online meeting experiences that are more interactive and inclusive.

4.3 Positive Work Environments

The discussion on positive work environments started off with asking the interviewees about their definitions of what well-being is to them. Control was shown to be a reoccurring theme among the interviewees where about five of the respondents answered that well-being to them is about having control over one's own work. Being able to control one's working hours, finding a good balance between work and free time, not feeling stressed, and having freedom and not being micromanaged are examples of how control equals to well-being at the workplace for the respondents. Furthermore, all of the interviewees mentioned that the work environment is of importance to them as having an effect on their well-being. It was mentioned by respondents 3⁶¹ and 9⁶² that they would feel calmer, more productive, and more comfortable if working in

⁶⁰ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

⁶¹ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

⁶² 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25



an environment of which they enjoy. The other reoccurring theme discussed by six of the respondents was inclusion, the ability to feel connected to one's colleagues, engaging in informal small talk during coffee breaks to get close to one's peers outside work-related matters that are enhanced through the physical work environment. Control and inclusion are mentioned by one and the same respondent at times, as shown by respondent 8⁶³ in the following quote;

“I say that you feel okay and that you are in control, that you have an agenda that you are on top of and, your colleagues that you feel well together with that you have good colleagues who can talk to...” ⁶⁴

The team spirit and culture at the workplace were shown to be of great importance for most individuals, to have a good relationship with their coworkers, feel included, and feel trust among coworkers. Respondent 2⁶⁵ further communicated how important inclusion in the workplace is;

“I always feel like it's important to have a good team by me (...) when we were working remotely, like not being able to meet my colleagues, not being able to talk, not being able to just walk over to the developers and asking like, just questions. I think it was very hard. You feel isolated.” ⁶⁶

When discussing if the interviewees' definition of well-being had been affected in any way since the beginning of remote working, many of them discussed that the interaction among coworkers has changed a lot and they have felt more isolated and have not been getting the interaction needed from work, as can be seen in the previously mentioned quote by respondent 2⁶⁷. The feeling of being isolated was further brought up and mentioned by respondent 10⁶⁸ and

⁶³ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁶⁴ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁶⁵ Account Manager at HL Design, Digital Interview, 2022-03-17

⁶⁶ Account Manager at HL Design, Digital Interview, 2022-03-17

⁶⁷ Account Manager at HL Design, Digital Interview, 2022-03-17

⁶⁸ Founder (Web Agency) at Brandstedt, Digital Interview, 2022-03-25



respondent 11⁶⁹ and how this affects an individual's mental health, and hence, one's well-being. Respondent 9⁷⁰ did, however, discuss more positive aspects on whether remote working has affected one's well-being by suggesting that the interactive functions information and communications technology offers, such as on Zoom, create a better response in a way. This is further shown in a quote by the respondent;

*“I mean in some way I think it has maybe improved because we don't complain so much because we don't talk so much (...) and it's very different if I give a presentation and people just look and like, that's it, but when they're on Zoom they can react to it. So, it's sort of faster reaction.”*⁷¹

Furthermore, the interviewees discussed whether their productivity level has been affected or not since the start of remote working. Here, most of the interviewees said that their level of productivity had increased because of remote working, that they are more focused on the task in front of them and save a lot of time when working remotely, and do not need to spend time on traveling. Although, Respondent 2⁷² said that;

*“I lack productivity when I can't go to the office and meet my coworkers. It has still worked good, but I think that when working home for a long period of time and not see the coworkers at all, it affected my productivity a lot.”*⁷³

Some of the interviewees, such as respondents 2⁷⁴, 6⁷⁵, and 10⁷⁶ further meant that their productivity was affected negatively because of the lack of interaction between coworkers. These respondents suggest that the loss of spontaneity, being able to solve problems in the corridor or pop into one's

⁶⁹ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

⁷⁰ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

⁷¹ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

⁷² Account Manager at HL Design, Digital Interview, 2022-03-17

⁷³ Account Manager at HL Design, Digital Interview, 2022-03-17

⁷⁴ Account Manager at HL Design, Digital Interview, 2022-03-17

⁷⁵ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

⁷⁶ Founder (Web Agency) at Brandstedt, Digital Interview, 2022-03-25



colleague's office for a quick question, affects one's productivity as this now has to be done through planned meetings. It was discussed that many ideas and creativity come from discussions among the coworkers which was missed by some of the interviewees since the start of remote working, this was highlighted through the interview with respondent 1⁷⁷;

*“When you're sitting alone a lot, just working, you are very productive. You work very fast, and you just sit there working, but your mindset gets a little bit boxed. You cannot think outside of the box because you're like you are sitting alone with your own thoughts. That's what I think affected me the most.”*⁷⁸

Furthermore, the interviewees were asked if the current information and communications technology used in their organization has improved or worsened their productivity in any way. Respondents 2⁷⁹ and 4⁸⁰ said that they were able to have more efficient meetings with different stakeholders because of these technologies which also meant that this has saved a lot of unnecessary traveling time, and more meetings could be scheduled in one day, as also mentioned by respondent 11⁸¹. These respondents further mentioned that the technologies have made it easier to explain and share projects with different stakeholders, and to follow up with the projects in a more efficient way. A few of the individuals also mentioned that having digital meetings makes it easier to schedule meetings with stakeholders more often that are positioned far away from their offices, and that the relationship between them and their partners or clients has had a positive effect because of these technologies. Respondent 2⁸² communicated this during the interview and said;

⁷⁷ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁷⁸ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁷⁹ Account Manager at HL Design, Digital Interview, 2022-03-17

⁸⁰ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁸¹ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

⁸² Account Manager at HL Design, Digital Interview, 2022-03-17



“It's easier to share and explain solutions like for what I do in my work, I create custom solutions for all of our clients (...) Sometimes some companies don't have like a good working conference from there where I can present everything. So, working remotely from there is actually better because I can show them in a better way.”⁸³

This is further emphasized by respondent 4⁸⁴;

“We have a lot of things that are outside of our business that have been improved by digital meetings. That we can check out and discuss more in meetings with suppliers and customers in other cities (...) That you can meet them remotely instead of making long trips.”⁸⁵

Although all interviewees recognize that the use of information and communication technologies increases their productivity by offering solutions that reduce travel time and contribute to more efficient meetings, the downsides of the tools that affect productivity are discussed by respondent 8⁸⁶;

“I think it's more our way of using them or that it actually needs you to pick up the phone or actually book something with someone that that's the part that has been, the barrier.”⁸⁷

In continuing along with the discussion on the importance of positive work environments for employees, this time connected to virtual realities, respondents were asked what they think the implementation of Metaverse could potentially have on their well-being and productivity. All interviewees agreed that Metaverse could have a positive effect on one's well-being and productivity by being a solution to the issues previously discussed about remote working. Metaverse was recognized to make the interaction between

⁸³ Account Manager at HL Design, Digital Interview, 2022-03-17

⁸⁴ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁸⁵ Human Resource at IV Produkt, Digital Interview, 2022-03-22

⁸⁶ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁸⁷ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24



colleagues even better and create a new level of communication that would make everyone feel more included. It was further mentioned by respondents 1⁸⁸ and 11⁸⁹ that Metaverse would be a new fun and exciting world to work in, which could affect creativity and, in that way, also productivity. Some of the interviewees were however skeptical about if Metaverse would be a safe and healthy way to carry out one's work or if it could affect their health in a negative way. Respondent 9⁹⁰ meant that;

“One thing they sort of didn't explain, which immediately made me worried is wearing the glasses. How would that affect my eyes, my eyesight, which is already bad. I would worry about my health.”⁹¹

In the following quote by respondent 8⁹², the ability to be more spontaneous in one's work is mentioned. With spontaneity, the respondents refer to easy and quick interactions with colleagues that often occur when working in an office, as also discussed earlier.

“If we could add on some more spontaneous functionality, as it seems to be here in the metaverse, I think that would absolutely help, because then we get another level to the remote working”⁹³

However, although the benefits of increased spontaneity and interaction that can improve productivity and well-being is recognized with Metaverse, the respondents also emphasize the continued need to meet physically in an office. Respondent 1⁹⁴ communicates this by saying;

“I think the idea is good and it could have a positive effect, but also I think, I don't think we get the same kind of interaction in if we are not physical

⁸⁸ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁸⁹ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

⁹⁰ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

⁹¹ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

⁹² Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁹³ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁹⁴ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16



beings talking to each other because the current metaverse is very like fictive.”⁹⁵

The respondents argued that a positive work environment to them is dependent on whether or not they perceive to be in control over their own work which contributes to feeling calmer and more comfortable with one’s work. The effects of social isolation that comes with remote working contributes to less spontaneity for employees to engage with each other. Loss in spontaneity was further argued by the respondents to affect their productivity in the sense that smaller issues that are usually solved in informal settings in an office, now require meetings to be formally scheduled which takes more time. The information and communications technology used has, however, resulted in more efficient meetings with external parties by reducing travel times as well. The implementation of Metaverse was believed to improve creativity and productivity by the respondents, and by potentially offering better social interactions it would increase employee’s well-being at work.

4.4 Technology Acceptance Model

When looking at the attitudes that the interviewees usually have toward the introduction of new technologies, all of them said that they are open to new technologies and are either curious or interested in what improvements they can contribute to one’s life. However, respondents 6⁹⁶ and 8⁹⁷ both expressed that although they might be positive towards new technology, they are not prone to being first adopters. As respondent 6⁹⁸ put it;

⁹⁵ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

⁹⁶ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

⁹⁷ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

⁹⁸ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23



“I think I'm very positive, but I'm not the first adapter (...) I think I want to first see the benefit with testing something new before I sort of leave my old way over, which works really well for me.”⁹⁹

Although the other respondents indicated their usual excitement for new technology, in one way or another, they all added that the new technology has to show an upside to it for one to positively engage with it. It was also mentioned in the interviews that the respondents want to know a lot about the new technology before buying or using it, additionally to see the value of using the technology before they buy it. Furthermore, respondents 9¹⁰⁰ and 11¹⁰¹ expressed the need to think about the safety issues before they want to use or buy a new technology, therefore they want to gain a deep understanding of the product before using it.

The respondents were further asked what would need to be considered for them to be positive towards the implementation of Metaverse specifically in their workplace. Respondent 5¹⁰² said that;

“The technological development is going so fast now and of course, you want to be part of it. You want to have more knowledge about the Metaverse. I definitely think that the Metaverse could become a reality and that there are a lot of possibilities with it.”¹⁰³

The quote from respondent 5¹⁰⁴ started off on a positive note, however, other respondents communicated concerns they had with Metaverse. Besides knowing if the new information and communications technology tool for remote working would add value to their daily work, respondents also want to

⁹⁹ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹⁰⁰ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

¹⁰¹ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

¹⁰² Human Resource at IV Produkt, Digital Interview, 2022-03-22

¹⁰³ Human Resource at IV Produkt, Digital Interview, 2022-03-22

¹⁰⁴ Human Resource at IV Produkt, Digital Interview, 2022-03-22



know that Metaverse is safe to use from a physical perspective as discussed by respondent 9¹⁰⁵;

“Like I mentioned, definitely some health reassurance, so I would like to know details about the glasses (...) I don't know before I use it. And after half a year and a year or some type of follow up to reassure that it doesn't have effect on my physical health.” ¹⁰⁶

Besides considering one's own physical safety from using the technology, other respondents such as respondent 4¹⁰⁷, further discussed safety from the perspective of ensuring one's privacy and its ability to provide reassurance that getting one's account hacked will not be a problem. Moreover, the respondents further discussed that they would prefer the implementation of Metaverse at their workplace to be an option for the employees as one way of working. They do not want to be forced to use new technology if they are happy with working as they are used to, but many of them are open to having it as an option so that they can try the technology and use it if they want. However, respondents 8¹⁰⁸ and 11¹⁰⁹ thought differently and meant that if Metaverse would be implemented at their company, it should be a decision from the management who apply a tougher approach where it is communicated that this is the new way of working and that everyone at the workplace should use this technology. A unified response to ensuring a successful implementation of Metaverse, however, is that it is easy to use for everyone, as can be seen in the quote by respondent 7¹¹⁰;

¹⁰⁵ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

¹⁰⁶ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

¹⁰⁷ Human Resource at IV Produkt, Digital Interview, 2022-03-22

¹⁰⁸ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

¹⁰⁹ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

¹¹⁰ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23



“They really need to make it really seamless and really easy. Cause if it's too complicated, like today it's really complicated. You're not gonna get like a huge audience. It's gonna take time to make it simple.”¹¹¹

While all respondents expressed curiosity and interest in new technology, they differed on how fast they would adopt a new technology. Adoption was argued to mainly be dependent on added value and benefits that a new technology would contribute with, which some respondents needed to be communicated more clearly than others for one to be positive towards its implementation. Safety and privacy were also discussed to be of importance where the respondent's needed reassurance before establishing a positive attitude.

4.5 Management Support

In the last part of the interview, respondents were asked questions about their expectations of support from management when implementing new technology to continue ensuring positive work environments as well as how to successfully implement Metaverse in particular. A common requirement raised by the respondents was that their management has to establish their own understanding of the benefits and added value before introducing and implementing new technology in the workplace. This was discussed in the interview with respondent 7¹¹² who said;

“If a management is going to introduce a new technology, they need to really understand it and be able to get people into it in a good way. Because if they're just like, ‘Hey, look, here's a headset’. They need to really understand a product and outline why and how.”¹¹³

The respondent continues by communicating that with Metaverse, in particular, it is important for management to not just implement it for the sake

¹¹¹ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

¹¹² Digital Marketing at Stratega Media, Digital Interview, 2022-03-23

¹¹³ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23



of implementing it but do it because it is believed it will make the workplace better. Respondents 6¹¹⁴, 9¹¹⁵, and 11¹¹⁶ further discuss the importance of management communicating their knowledge on the opportunities, benefits, and the added value of implementing new technology to employees. Respondent 6¹¹⁷ put it in the following way;

“Very much management information. What is coming? Why is it coming? What kind of benefits do we expect, trainings for people that need that, maybe a chance to experiment a little bit and test and then, learning in the business, start using it and learning along the way (...) I think as soon as you see all the benefits, then it will be so much easier.” ¹¹⁸

This quote also brought up the more concrete need for education when implementing new technology in a workplace, which was also stated by respondent 3¹¹⁹ who highlighted the importance of education by saying *“Education, education, and try it out and also make sure it's safe.”* All the interviewees mentioned that a deep understanding of the technology and training would be necessary for them. A similarity could be seen in that they want to understand the technology before using it and have a picture of security and safety issues that can be connected to using it.

Moreover, differences in implementation strategy were seen in the answers of respondents when asked how management can ensure a successful implementation of Metaverse. The benefits and added value previously discussed were unanimous in importance among all respondents, however, with respondent 8¹²⁰ saying that its implementation needs to be quick and pushed on everyone at the same time, while respondent 1¹²¹ instead suggests

¹¹⁴ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹¹⁵ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25

¹¹⁶ Founder (Autonomous Visual Inspection) at Gimic, Digital Interview, 2022-03-28

¹¹⁷ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹¹⁸ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹¹⁹ Business Developer at Växjö Municipality, Digital interview, 2022-03-21

¹²⁰ Digital Development Manager at IKEA of Sweden, Digital Interview, 2022-03-24

¹²¹ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16



that keeping its implementation optional would result in higher implementation success. Respondent 1¹²² is further supported by respondent 4¹²³ who said;

“Yes, and that it will be craved and not forced. You have to train everyone and make sure that everyone is on board and wants to use the new way of working. I definitely think this will be used in the future and it's so exciting.”¹²⁴

Respondent 6¹²⁵, on the other hand, was in support of applying an implementation that would pertain to all employees of an organization, referring to the beginning of the pandemic suggesting that the initial change to remote working worked so well partly due to it being forced. The respondent further recognized different levels of adapters which is important for management to consider in its implementation, which can be seen in the following quote;

“I guess, some will raise their hand and just rush into it, believing that all new things are better than their own things. Then there will be people and me that come in the second wave and maybe they also need to spend even more time on the third wave (...) there was one of the positive things with corona that everybody was forced to learn this.”¹²⁶

Different types of adopters can also be seen in the interview with respondent 7¹²⁷ who said *“I'm pretty laid back, so I'm not like, Hey, look, I need this list.”* When discussing needs to be positive towards the implementation of new technology. This could further be seen in the interviewees with respondents

¹²² Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

¹²³ Human Resource at IV Produkt, Digital Interview, 2022-03-22

¹²⁴ Human Resource at IV Produkt, Digital Interview, 2022-03-22

¹²⁵ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹²⁶ Competence & Learning Leader at IKEA of Sweden, Digital Interview, 2022-03-23

¹²⁷ Digital Marketing at Stratega Media, Digital Interview, 2022-03-23



1¹²⁸, 2¹²⁹, and 9¹³⁰ who all recognize the exciting developments technology contributes to but instead refer to other generations they believe might be more resistant and in need of more support.

Added value and benefits that the implementation of new technology contributes are once again highlighted by the respondents. The respondents further express the importance of management establishing their own understanding of the technology first and then providing education and training for employees that will facilitate the implementation. Different implementation styles are discussed by the respondents where it is either forced upon all employees at once or offered as an option to see to everyone's individual needs.

¹²⁸ Infrastructure/Architect within IT at Södra, Digital Interview, 2022-03-16

¹²⁹ Account Manager at HL Design, Digital Interview, 2022-03-17

¹³⁰ 3D Developer at IKEA of Sweden, Digital Interview, 2022-03-25



5 Analysis

In this chapter, the categories developed from the coding conducted will be presented and analyzed connected to the existing theories presented earlier in the thesis. These categories are; Working with Technology, Secure or Improve a Work Environment, and Good Communication is Key. Lastly, support of the model describing the theoretical relationships will be discussed.

5.1 Working with Technology

Through the literature, remote working has been found to contribute to a number of advantages and disadvantages. Babapour Chafi, Hultberg and Bozic Yams (2022) and Kelliher and Anderson (2008) identified positive attitudes towards remote working to be connected to increased flexibility. Through the empirical data, it can be seen that this is supported by the respondents who discuss increased flexibility in terms of improved work-life balance, meaning that employees have better possibilities of allocating one's time to better suit the needs of one's professional and private life. Disadvantages of remote working, on the other hand, as discussed by Wang et al. (2021) have mainly been connected to the social aspects of work, providing feelings of isolation and, hence, a lost sense of comradery. Social interaction is a main theme identified from the empirical data, with all respondents discussing the absence of comradery with colleagues to be a major drawback with remote working and recognizing it to be a point of improvement in the new way of working.

While time allocation has been improved, in the sense that employees can book more meetings in one day in comparison to before where traveling might have occurred, remote working also requires more time. By not having the opportunities to solve problems in informal settings, as are often presented in an office space, such as in the hallways or during a coffee break, employees instead have to schedule meetings formally in each other's calendars which reduces the sense of comradery amongst one another. Hence, remote working



is not seen as either good or bad, but rather as a mixture of both. When discussing flexibility, employees' attitudes are positive, but when acknowledging the effect on one's mental health due to losses in social interaction, employees' attitudes towards remote working are negative. Therefore, to ensure that the implementation of new technology in a workplace for the purpose of remote working is successful, it has to clearly communicate the benefits and the added value it would contribute with.

As a result of this finding, the technology acceptance model by Davis (1985) has been greatly adaptable. With Davis (1985) founding an individual's attitude towards new technology on two main features, perceived usefulness and perceived ease of use, the empirical findings showed support for this. The respondents highlighted that for one to be positive towards new technology there must be a clear upside to it, that there has to be some added value and benefits compared to the current technology used, it could directly be connected to perceived usefulness as the very definition of the notion is the added value the technology would bring into one's work performance (Davis, 1985). Furthermore, it has been acknowledged that these expected benefits and added value are again connected to social interaction and comradery. If the new technology implemented in one's workplace is not improving what employees now find to be lacking in current technology, a positive attitude towards its implementation would be difficult to achieve.

The other feature of the technology acceptance model, perceived ease of use, is mentioned by all respondents as a given when considering the implementation of new technology. The technology of virtual reality is mentioned by the respondents to be lacking and is currently not fulfilling its full potential, which is why it is emphasized that it must be seamless and effortless to use for it to successfully gain an audience in the workplace. Polap et al. (2020) do, however, recognize that virtual realities are continuously advancing and now faster than ever, with Facebook's redirection of focus on the development of Metaverse being a great example of technological



advancements. However, researchers such as Owens et al. (2011) and Kim (2021) recognize that, although the popularity of the concept of Metaverse is increasing, there is still a lack of research on the topic. Knowledge of Metaverse is also seen to be scarce among the respondents and therefore not yet a universally known concept. However, it has been identified from the findings that there is a generational difference on this subject, where there is more awareness of Metaverse among the younger respondents in comparison to the older respondents.

On the topic of working with technology, it was further recognized throughout the discussions that generational differences exist and might need to be taken into account. While demographics such as age were not focused upon in the interviews, the respondents mentioned generational differences on various occasions. For example, respondents 1 and 2 referred to themselves as not being resistant to new technology but recognized how their surroundings who belong to older generations have shown stronger resistance and acknowledged that the resistance of others may affect their own work. However, looking at other respondents such as 6 and 8, these belong to an older generation than 1 and 2, who even though they might not be early adopters they still recognized the benefits of adopting new technology and being innovative and accessible to new ways of doing things. The notion of age having an impact on attitude towards the implementation of new technology was brought forth by Manis and Choi (2019) in their variation of the technology acceptance model, called the virtual reality hardware acceptance model. In Manis and Choi's (2019) study age, together with past use and curiosity, were variables affecting an individual's perceived usefulness and ease of use of technology.

Through the empirical data, indications of these three variables and their impact on attitudes were strong and therefore found to be applicable and supported in the case of adapting a technology such as Metaverse. With the respondents referring to their previous experiences with new technology as something positive, saying that they are most often curious and interested



about what new benefits and value it can add to one's life, similarities are seen between Manis and Choi's (2019) study on the age, past use, and curiosity variables identified by the authors as well as the literature on change management by Dubrin & Ireland (1993), Eby et al. (2000) and Judge et al. (1999).

One of the pillars of change management, as discussed by the literature, is the role personality traits have on successful change implementation in an organization. With personality traits being described with characteristics such as skeptical and self-efficacy to understand whether or not an individual is open to change, it can be seen through the empirical data, with all respondents being mostly positive towards new technology, early adopters or not, that the respondents hold higher levels of self-efficacy which makes them approachable to change. However, indications of resistance to change are found to be related to late adopters of change, therefore more skeptical people who are more likely to resist change can be seen as late adopters, while people with high levels of self-efficacy would be more likely to adapt to change early on. The respondents are, however, not seen as skeptical but rather holding understandable requirements before accepting the implementation of potentially new technology such as Metaverse at the workplace. Moreover, the findings strongly indicate that the respondents would be open to the implementation of Metaverse as long as it solves the issues of social isolation by endorsing comradery, spontaneous meetings, and informal small talk among colleagues.

5.2 Secure or Improve a Work Environment

Elsaadani (2014) suggests that investment into information and communications technology is essential as it is the pursuit of becoming a highly efficient and effective organization. The gathered data does, however, imply a need to consider the purpose of implementing new technology and how it affects the employee's working environment. By analyzing the



empirical data, it has been recognized by the authors of this paper that there are two different ways of ensuring that a positive work environment exists when introducing new technology into an organization. These are to either secure or improve the work environment that currently is. Sparks, Faragher and Cooper (2001) identified control to be one of the pillar stones that explains an employee's well-being at work. Similarly, the respondents discussed well-being to be about having control, control over one's own hours of the day to manage a healthy work-life balance without being micromanaged. As shown from the interviews, well-being from the aspect of control among the respondents has been positive since the change to remote working.

The research by Sparks, Faragher and Cooper (2001) also states that the introduction of new technology has changed the very nature of how work is carried out which in turn has been a major readjustment for employees. It becomes evident from the empirical data that one's control over work has greatly improved since the change to remote working which indicates the need to secure a work environment that supports this aspect of work. Furthermore, having control at work has also been recognized to be connected to improved efficiency and effectiveness with Bhatti and Qureshi (2007) identifying it to be the result of employee productivity, in terms of reduced traveling and more focus on the tasks at hand. A difference becomes evident when discussing employee productivity and well-being with the respondents, and that is whether the respondents consider work with clients or external parties, and whether they are considering their relationships with colleagues. When discussing meetings with clients, the respondents recognize that they are able to utilize their time more efficiently and conduct more external meetings in one day which improves their productivity and work performance. It is also worth mentioning, however, that personal connections with one's clients are lost to some extent which might affect work relationships. For internal purposes, the change to remote working has instead been more negative with many respondents referring to social isolation, as discussed in the previous section.



As recognized in the studies by Gadeyne et al. (2018) and Baumeister et al. (2021) the use of information and communications technology may have a different effect on employees' well-being, by arguing that the increased flexibility may increase the well-being for some while the constant connectivity may decrease it for others. As earlier discussed, social interaction is a recurring theme and, hence, identified as the main theme when considering the disadvantages of remote working and the use of information and communications technology, as also supported by the literature (Wang et al. 2021). Here, improving, instead of securing, the work environment is recognized. With Day, Kelloway and Hurrell (2014) suggesting in their study that to ensure business success and economic growth, organizations must create positive work environments in which individuals thrive, the empirical data gathered through the interviews provide a crucial insight into what has to be improved for the purpose of continuously ensuring a positive work environment when introducing new technology such as Metaverse. Improvements have to be made in relation to social interaction as it was before remote working. For new technology like Metaverse, which intends to enhance the social interaction amongst employees, to be successful it has to ensure the social interaction is as close to reality as possible, if not better.

Moreover, remote working may improve efficiency and effectiveness in job productivity with external clients while reducing well-being and productivity in the absence of social interaction with internal colleagues. It indicates a complexity with attitudes toward remote working pertaining to specific situations that is difficult to generalize. This is further supported in the study by Galanti et al. (2021) who recognized that employee productivity has fluctuated throughout the COVID-19 pandemic. The control employees have gained over their work since the introduction of remote working is highly desired and an expectation that answers to one's well-being and productivity at work which is indicated as a need to secure a positive work environment. However, managing employees' social interactions to stimulate their sense of



comradery has to be improved in order for the perception of one's work environment to be positive.

5.3 Good Communication is Key

Through the empirical investigation of this study, it could be seen that if an organization is to implement new technology such as Metaverse, the employees highly value communication and information from the management. All the employees interviewed mentioned that it is important for them to understand the technology, which makes it important for the management to provide them with the information needed to get a deep understanding of the new technology and how it could enhance communication within the organization. This aligns with previous studies by Collange and Guegan (2020) talking about the use of virtual reality for communication, and Zawadzki et al. (2020) who studied virtual reality in employee training. It could be seen through this study that many employees have the need for training when being introduced to new technologies. They want some guidance from the management to understand the use and value of the new technology. In some cases, it could also be seen that a few employees felt that they only needed to try the technology out a couple of times to get used to it, and training was not as important to them as long as they had all the equipment needed. In line with this, it could further be seen that there were different types of adopters among the employees, where some of them need more guidance and communication from the management, while others felt that they can learn and get used to new technology on their own. This can be connected to the study by van Dierendonck et al. (2014) who discusses the importance of guidance depending on the employees' own needs.

Although, what could be seen among all employees was that the technology needs to be easy to use for everyone within the company if the implementation is going to be successful. It is therefore important that the management provide the employees with the communication and information needed for the



implementation of new technology such as Metaverse to avoid any resistance towards it, as also stated by Schulz-Knappe, Koch, and Beckert (2019) talking about the importance of communication in an organizational change. Furthermore, one requirement that was commonly mentioned by the employees was that when implementing new technology within the organization, it is important that the management have their own understanding of the values and benefits before introducing it to their employees. It could be seen that it is important that the management communicates the positive effect the use of the technology will have and what vision they have for implementing it within the organization. This was seen as important for the employees to get a positive perception and adapt to the technology, which also aligns with previous research by Faupel and Süß (2019), talking about the importance of creating a positive vision toward an upcoming change within the organization to ensure a positive attitude among the employees.

Not only is it important with communicating the benefits and added value of implanting a new technology, but it could also further be seen that it is of importance for the employees that the management communicates the opportunities that come with using it, in order for the employees to understand why they should use this new way of working. As mentioned by Dávideková, Mjartan, and Greguš (2017), the use of virtual reality can create a higher level of interactivity and flexibility within the organization. Furthermore, it can create many opportunities and new ways of working as mentioned by Bekkers, van Duivenboden, and Thaens (2006). Although, for this to be positively accepted by the employees of the organization, it is crucial that the management communicates this in a good way to its employees.

Van Wart et al. (2017) researched how and when organizations should adopt new technologies to ensure successful implementation. Existing literature has discussed different types of leadership which are of importance to ensure a successful implementation of new technologies. Transformational leadership



is one of them, suggesting that leaders should take charge and create a positive vision around a change within the organization, which in turn has a direct impact on the attitudes of the employees, as discussed by Faupel and Süß (2019). Another leadership style, servant leadership, focuses more on the employees' needs to guide them through their work, which has been studied by van Dierendonck et al. (2014). In this study, it could be seen that both of these leadership styles are of importance, depending on the employees' preferences. When discussing how the management should go about implementing a new technology such as Metaverse, the employees mentioned both of these leadership styles as being something that the management should consider. Most of the respondents agreed that the management should implement Metaverse as an option to how they are already working, in order to let the employees get to know the new technology at their own pace, and so that they can decide in what way they want to work and which technologies to use. Another way mentioned by only the employees was that the management should have a tougher approach, where everyone should use the new technology and the management should communicate that it is the way they are going to work moving forward.

5.4 Support of the Model Describing the Theoretical Relationships

Throughout the analysis that has just been presented, it has strongly indicated support for the theoretical relationships discussed by literature. As it appears in the analysis regarding the topics of information and communications technology, attitudes, positive work environments, technology acceptance model and the importance of support from management in organizational change, these different notions influence each other making the boundaries between them non-existent but rather intertwined, as if one cannot be discussed without the other. By engaging in discussions with the respondents on their requirements to be accepting of the use of new technology for remote working, it became evident that while the technology had to be proven useful



it was just as important that it contributed to a positive work environment for which their attitudes were dependent on their managements approach to introduce the technology into the workplace.

Michaelis, Stegmaier and Sonntag (2010) state that leadership has a crucial influence on successful implementation of innovations, such as that of new technology, while Klein and Knight (2005) support this by arguing that employees are more likely to dismiss an innovation in the absence of management support. This further aligns with the respondents emphasizing that their attitudes toward the potential implementation of a technology such as Metaverse into the workplace is dependent on how their organization conveys information about the technology itself, hence, supporting the relationship between management support and the road to forming attitudes through perceptions of usefulness and ease of use. With the respondents implying that control over one's work is one of the main factors determining well-being at work, as is the opportunities to engage in social interactions with colleagues, Day, Kelloway and Hurrell (2014) emphasizes that creating positive work environments is essential for business success, for which the respondents indicates that the responsibility mainly lies with management. Hence, further supporting the relationship to positive work environments as well, and its role in affecting attitudes.



6 Conclusion

This final chapter presents the conclusions drawn from the previous analysis. It further indicates whether or not the purpose of this thesis has been achieved. Theoretical and managerial implications are discussed, finalizing with suggestions for future research opportunities and limitations identified.

6.1 Conclusion of Analysis

The purpose of this thesis has been to explore attitudes towards the use of virtual realities, with Metaverse as a reference point, for remote working in the case of employees within organizations in Sweden. Metaverse has been used as a reference point due to its recent increase in popularity and its intent to change the way remote working is carried out today.

Employee's attitudes toward the use of virtual realities for remote working can be seen as a rather complex notion as they are both positive and negative according to this study. The respondents who participated in this research highlighted both positive and negative aspects of this matter with the positive aspects being increased flexibility in terms of a better work-life balance. It was argued that employees felt that they could allocate their time better to fit both their professional and private life when working remotely. Furthermore, traveling time within the work was reduced due to remote work which contributed to more time for other obligations within their work, which was further seen as a positive aspect. The negative aspect that was brought up was the lack of social interaction among the employees, which was seen as a major drawback of remote working. This was discussed, however, as a possible improvement or an opportunity to develop future technologies, such as Metaverse. With considering both the positive and negative aspects of employees' attitudes, a conclusion drawn is that remote working is a mixture of both, meaning that attitudes in connection to flexibility are seen as positive,



while the attitudes in connection to mental health within remote work were seen as negative due to the lack of social interaction.

Although remote working has presented employees with many new opportunities with its increased freedom, it has been found in this study that remote working to the extent it was applied during the COVID-19 pandemic is not desired in its continuity. Employees strongly state that the option to go into one's office and engage with colleagues is of utmost importance. Resistance to remote working is, hence, indicated as it has been understood that employees do not want a technology that replaces social interaction all together by eliminating physical offices, but rather improves social interaction in the remote work settings that currently exist.

Furthermore, the aim of this study was to additionally provide an understanding of what organizations need to consider following the increased use of virtual realities. It has become evident, both from literature and the empirical data, that to continue ensuring a positive work environment for employees is crucial for the success of changes made in an organization, for which management is highly responsible for.

Good communication and transparency in information are expectations employees have on their management if introducing new technologies used for remote working, such as Metaverse. The respondents of this study emphasized the role management has on determining whether or not they themselves are positive or not towards a change. However, employees have been found to desire different approaches when implementing new technology, with some suggesting a direct approach where all apply it at once, while others prefer it to be optional to ease into the use of the technology more easily. The analysis of the empirical data further indicates a leadership style that sees to the individuals need more than the organization as a whole.



In conclusion, the key takeaways from this study is that attitudes toward virtual realities for remote working are complex and dependent on many different factors as this study has provided an understanding of differences in remote working depending on context. The main themes discussed around remote working were, however, control and freedom to decide over one's work and the loss of comradery with colleagues and social isolation. New technology, such as Metaverse, has to ensure it continues providing employees with control over their work but solves the issues of social isolation while still not eliminating physical interactions between colleagues completely. Moreover, management has to deeply consider the needs of the individual employee before implementing new technology, gathering an understanding of what is expected and needed by their specific employees will better ensure successful implementation.

6.2 Theoretical Implications

The presented empirical data and analysis are of strong support to the theoretical framework formed by the authors, as especially became evident from the analysis in section 5.4. However, on the specific topic of the opportunities and possibilities of virtual realities for the purpose of remote working, the existing literature did not have any direct associations between the notions. Literature on virtual realities and its use in fields that were mainly for educational purposes existed, as did literature on attitudes toward remote working as a result of the COVID-19 pandemic. This is where the main theoretical implication is identified. This thesis contributes to the literature by providing a study that focuses on not only attitudes toward virtual realities, but attitudes toward virtual realities for the specific use of remote working. The theoretical topics of information and communications technology, attitudes, positive work environments, technology acceptance model, and the importance of management support, were all reinforced from the findings of this study. The key references that this thesis is in support of is that of Babapour Chafi, Hultberg and Bozic Yams (2022), Kelliher and Anderson



(2008), and Wang et al. (2021) on the topic of attitudes toward remote working, Davis (1985) technology acceptance model, and Sparks, Faragher and Cooper (2001) and Elsaadani (2014) on the understandings of positive work environments. Furthermore, this study recognizes and answers to Owens et al. (2011) and Kim (2021) studies that found a need for more research on the use of Metaverse for remote working. Finally, a key reference on the importance of management support is that of Schulz-Knappe, Koch and Beckert (2019) where communication is found to be a main determinant to successful change implementation. The findings of this study additionally supported the relationships between the theories, strengthening the understanding of how they are all intertwined, hence, contributing to the literature with a study that clarifies these relationships and facilitates the literature on the topic of attitudes toward virtual realities for remote working.

6.3 Managerial Implications

The findings of this thesis contribute with knowledge to management on how to proceed with their leadership when faced with the introduction of new technology into the workplace that would affect employees' way of working. As the expectations on Metaverse are quite high and are believed to be the new era of the Internet, this thesis provides proactive suggestions on how to prepare for its potential implementation in organizations in the future. While Metaverse is used as a reference point for the purpose of this thesis, the managerial implications are applicable for the implementation of any new technology that would change employees' way of working.

With the help of this study, management acquires valuable insights as to what the needs are of employees in ensuring a desired workplace. While innovations that are meant to improve organizations in all matters are constantly developed and introduced into organizations, it is crucial for management to consider the needs of their employees to ensure successful implementations. This study suggests, for the introduction of new technology such as Metaverse,



management has to be transparent and communicate advantages clearly to those the technology would affect. However, per the discussions with the respondents, two different directions for implementation are suggested. Either management forces the implementation on all employees at the same time, or management allows the implementation to be optional, hence, allowing employees to decide for themselves whether or not they want to disrupt their way of working. Nevertheless, the findings imply that management should therefore conduct research among employees beforehand to determine the best solution for one's particular organization that would result in the best outcome.

Furthermore, providing employees with support in the form of education on how to use a new technology is found to be essential for them to be positive towards an implementation. This study, therefore, indicates to management that preparation in the form of education and easy access to support would facilitate the implementation and more likely contribute to positive attitudes amongst employees. Moreover, even though new technology such as Metaverse might be new and exciting where organizations want to be quick to implement, this study suggests to management that considering the needs of one's employees is the only way of ensuring successful implementation that continuously ensures happy and content workers.

6.4 Limitations

Any research that is conducted is bound to have a set of limitations that might have affected the outcome of the study. These limitations are important to acknowledge as they communicate the authors understanding of the potential weaknesses of the study, which, in turn, could provide insights and opportunities for further research.

To begin with, a limitation identified is in connection to the concept of Metaverse. While Metaverse has grown in popularity, from which the authors acknowledged this through increased word-of-mouth amongst their



surroundings, the knowledge about the phenomenon was scarce amongst the respondents interviewed. Through the findings, it was found that knowledge about Metaverse was mainly amongst the younger generation, the same as the authors, which might be an indication that knowledge of Metaverse is still fresh and has yet to reach older, or more, generations. Although the authors of this paper do not necessarily see that limited knowledge of Metaverse was a weakness for the purpose of the study as valuable information about attitudes toward virtual realities for remote working was still gathered, it might have affected the respondent's discussions on the topic to some extent. Similarly on the topic of Metaverse, as the concept is relatively new to the general public and there is no unified definition of it, it could have obstructed the respondents' discussions on the opportunities of its implementation in the workplace as respondents might have constructed different ideas of what Metaverse would entail to them. A video was included in the interview guide to reduce the risk of this happening, however, there is no guarantee and the possibilities of this affecting the outcome should still be taken into consideration.

Considering the number of interviews conducted for this research, it might appear scarce to the reader as the scope pertains to Sweden as a whole. The authors conducted interviews until saturation was achieved, however, it could still be seen as too small a number of interviews for it to validate the findings. Furthermore, the interviews were conducted in online settings which may have affected the level of interaction between the interviewer and interviewee. As it has now become evident from the analysis of the empirical data, online meetings can be rather impersonal. This also pertains to the interviews conducted for the purposes of this thesis, where some interaction might have been lost due to the limited ability to read body language for instance.

Lastly, since the literature on the topic of attitudes towards virtual realities for remote working is rather limited, it required the authors to observe literature from different fields of study that would pertain to the desired outcome.



Therefore, the theoretical framework, with the effort of trying to simplify the reader's understanding with a model explaining the theoretical relationships, might still be perceived as too complicated and only touching upon the surface of the topics.

6.5 Future Research

The authors of this paper see this research as the start of evaluating and studying the success new technologies for the purpose of remote working could have on employees' work performance, productivity, and well-being. As previously acknowledged as a limitation, that the literature on the topic of attitudes toward virtual realities for remote working in particular is scarce, the intent of this research has been to recognize its potential in research and provide others with an initial understanding of what drives employee attitudes. Therefore, the opportunities for future research are endless.

While this research did not focus on any other factor than employees working in organizations in Sweden, there are opportunities for future research to study other variables such as age, work role, type of industry, and type of adopter, to name a few. Other variables, such as personality traits, were only touched upon in this research, allowing the opportunity for future research to dive deeper into the psychology behind these personality traits that guide the attitudes and behaviors of individuals when exposed to change. Moreover, throughout this thesis, the authors recognized that remote working could be divided into different contexts. Remote working could be referred to as simply not being in the office when conducting one's work, as is the most common definition of the concept as identified through the literature as well, however, remote working could also pertain to an employee being in one's office but conducting meetings with external parties in an online setting. This could create interest and opportunities for future research as to what contexts new technology for remote working is most desired and what differences in expectations there might be from individuals between these two contexts.



In the presentation of Metaverse in the introductory chapter, the feature of paying for access in virtual environments is discussed. A suggestion to future research is to investigate organizations' opinions on the notion of buying office space in a virtual environment rather than investigating in a real time, physical office. What are the advantages and disadvantages, and what would this mean for social interaction and employee well-being?

Furthermore, the chosen data collection method for this study was semi-structured interviews, which was deemed most appropriate to provide the researchers with valuable content. However, it is recognized that other forms of qualitative data collection would also be suitable. For instance, conducting focus groups would allow greater discussions on the topic and also allow differences between the respondents to perhaps become more evident and therefore more easily analyzed. This could further be applied to either one and the same organization to research differences in attitudes amongst employees within that same organization, which would allow for a deeper understanding of what role personality traits, interest, and curiosity for instance play into attitudes towards new technology.

Types of management style that best facilitates the implementation of new technology for remote working at the workplace could also be of interest from a leadership perspective. Transformational and servant leadership was briefly brought up in the theoretical framework to suggest that management styles that see to the needs of their employees are preferred but without further analyses of the two. A suggestion to future research could therefore be to investigate the effect different types of leadership styles could have on employees' attitudes when implementing technology such as Metaverse that would affect their way of working.



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Appendix 1

Interview Guide - English

1. How do you carry out your work today? i.e how much remote work and how much physically in the office?
2. In the beginning of the pandemic, with remote working becoming reality for many, what was your initial opinion/attitude towards this new way of working?
3. How have you found the current information and communications technology used in remote working to be/function? i.e Zoom and Teams
4. What effects has this had on your professional and private life?
5. What does well-being at work mean to you?
6. Based on your definition of well-being at work, has this been affected or changed since the change to remote working?
7. Have you noticed any effect on your level of productivity since the start of remote working?
8. In what ways do you think information and communications technology has improved or worsened your productivity?
9. What is your knowledge on virtual realities and its current application areas?
10. Is VR used in any way within your work? How, why?
11. What do you know of Metaverse?
12. Has Metaverse been discussed in any way within your workplace?

Link to video: <https://www.youtube.com/watch?v=uVEALvpoiMQ&t=2s>



13. What is usually your attitude towards the introduction of new technologies and its use in your everyday life? And what factors is your attitude based on?

14. What effect do you think the implementation of the Metaverse for remote working at your workplace could have on your well-being and productivity?

15. What do you think the Metaverse can contribute to in continuing with remote working (that the current ICT do not fulfill)?

16. If the Metaverse was to be introduced at your workplace for remote working, what would need to be considered for you to be positive toward its implementation?

17. In the future, how would you prefer to work, completely remotely, hybrid, or only physically in the office?

18. If continuing with remote working, is there anything you are missing at the moment that, to you, needs to be improved or developed (that you believe the Metaverse can fix)?

19. How can your management continue ensuring a positive work environment for you and your colleagues when introducing new technologies?

20. What support would you expect or require from your management to make the implementation of the Metaverse successful in your workplace?



Appendix 2

Interview Guide - Swedish

1. Hur arbetar du idag – hur mycket distansarbete och hur mycket är du på kontoret och arbetar?
2. I början av pandemin, när distansarbete blev verklighet för många, vad var din första inställning/attityd mot detta nya sätt att arbeta?
3. Hur har du tyckt att de nuvarande information och kommunikationsteknologierna har fungerat – till exempel Zoom och Teams?
4. Vilken effekt har det haft på ditt professionella och privata liv?
5. Vad innebär välmående på arbetsplats för dig?
6. Baserat på din definition av välmående på arbetsplats, har detta påverkats sedan ni började med distansarbete?
7. Har du märkt någon skillnad på din produktivitet sedan ni började med distansarbete?
8. På vilket sätt tycker du att de nuvarande informations och kommunikationsteknologierna (Zoom/Teams) har förbättrat eller försämrat din produktivitet?
9. Vad är din kunskap om virtuella verkligheter och dess nuvarande användningsområden?
10. Används virtuella verkligheter på något sätt i ditt företag idag? Hur, varför?

Länk till video: <https://www.youtube.com/watch?v=uVEALvpoiMQ&t=2s>

11. Vad vet du om Metaverse?



12. Har Metaverse diskuterats på något sätt i ditt företag?
13. Vad är vanligtvis din attityd gentemot introduktionen av nya teknologier och dess användning i ditt vardagliga liv? Och vilka faktorer är din attityd oftast baserad på?
14. Vilken effekt tror du att implementeringen av Metaverse för distansarbete kan ha på ditt välmående och produktivitet?
15. Vad tror du Metaverse kan bidra med framöver med fortsatt distansarbete som de nuvarande information och kommunikationsteknologierna inte uppfyller?
16. Om Metaverse skulle introduceras på din arbetsplats för distansarbete, vad hade behövts hållas i åtanke för att du ska vara positiv till dess implementering?
17. Framöver, hur hade du föredragit att arbeta? Helt på distans, en hybridlösning, eller helt tillbaka på plats i kontoret?
18. Om du fortsätter med distansarbete, är det något du saknar för tillfället som behöver utvecklas eller förbättras, som du tror Metaverse hade kunnat fixa?
19. Hur kan din ledning/chef fortsätta försäkra en positiv arbetsmiljö för dig och dina kollegor vid introduktion av nya teknologier?
20. Vad för stöttning hade du behövt/förväntat dig från din ledning/din chef för att göra implementeringen av Metaverse lyckad och accepterad på din arbetsplats?



Appendix 3

Table of Operationalization

Concept	Category	Item	Source	Question Number
Development of Information and Communications Technology	Information and Communications Technology	Using information and communications technology for remote work	Bekkers, van Duivenboden & Thaens (2006)	1. 3.
	Virtual Reality	Knowledge and awareness of virtual realities, such as Metaverse	Gutiérrez, Vexo & Thalmann (2008); Polap et al. (2020).	9.
	Virtual Reality		Collange & Guegan (2020); Zawadzki et al. (2020)	10.
	Virtual Reality		Owens et al. (2011); Kim (2021)	11. 12. 15.
Defining and Understanding Attitudes	Employees Attitudes Towards Remote Working	Understanding what employees have found to be positive and negative with remote working that affects their attitude towards the new way of working	Choi (2011); Dubey & Tripathi (2020)	2.



	Employees Attitudes Towards Remote Working		Babapour Chafi, Hultberg & Bozic Yams (2022)	4. 17.
	Employees Attitudes Towards Remote Working		Martin & Omrani (2015); Øyen et al. (2018)	18.
Positive Work Environments	Positive Work Environments	Defining positive work environments in terms of well-being and productivity	Elsaadani (2014)	14.
	Well-Being	Clarifying what well-being at the workplace means to the individual employee and how it has been affected due to remote working	Ryan & Deci (2001); Ryff & Singer (2008)	5.
	Well-Being		Baumeister et al. (2021)	6.
	Productivity	Understanding how employee's productivity has been affected due to remote working	Galanti et al. (2021)	7.
	Productivity		Galanti et al (2021); George et al. (2021)	8.
Technology Acceptance Model	Technology Acceptance Model	Understanding employees process in creating an	Davis (1985)	13.



		attitude towards new technology		
	Technology Acceptance Model		Chuttur (2009); Davis (1985)	16.
Importance of Support from Management in Organizational Change	Importance of Support from Management in Organizational Change	What employees need from their managers to ensure successful implementation of new technology	Strauss, Griffin & Rafferty (2009); Faupel & Süß (2019)	19.
	Change Management	What management should consider ensuring positive outcomes	Elving (2006); Dubrin & Ireland (1993); Eby et al. (2000); Judge et al. (1999)	20.