DOCTORAL (Ph.D.) DISSERTATION

Mag. (FH) Alexandra Arbter, MSc.

University of Sopron
Sopron
2023

University of Sopron

Alexander Lámfalussy Faculty of Economics

Széchenyi István Doctoral School of Business Economics and Management

Joint Cross-Border PhD Program

THE IMPACT OF REMOTE WORK ON CHANGE MANAGEMENT IN THE ERA OF A PANDEMIC

Doctoral (PHD) Dissertation

Written by:

Mag. (FH) Alexandra Arbter, MSc.

Supervisor

Prof. Dr. Dr. h. c. Csaba Székely, DSc.

Sopron

2023

THE IMPACT OF REMOTE WORK ON CHANGE MANAGEMENT
IN THE ERA OF A PANDEMIC

Dissertation to obtain a PhD degree.

Written by: Mag. (FH) Alexandra Arbter, MSc.

Prepared by the University of Sopron

István Széchenyi Management and Organisation Studies Doctoral School

within the framework of the

International Economy and Management Programme

Supervisor:

Prof. Dr. Csaba Székely

The supervisor has recommended the evaluation of the dissertation be accepted: yes / no

_____

supervisor signature

Date of comprehensive exam: 20_____ year _____ month _____ day

Comprehensive exam result _____ %

The evaluation has been recommended for approval by the reviewers (yes/no)

1. opponent: Dr. _____ yes / no   _____

(signature)

2. opponent: Dr. _____ yes / no   _____

(signature)

Result of the public dissertation defence: _____ %

Sopron, 20____ year _____ month _____ day

_____

Chairperson of the Judging Committee

Qualification of the PhD degree: _____

_____

UDHC Chairperson

TABLE OF CONTENTS

ABSTRACT

Uncertain times refer to periods of unpredictability and instability, characterized by a range of potential scenarios such as natural disasters, war, economic crises, or pandemics. Such times can be impactful for change management because they often require organizations to quickly adapt to new and unexpected circumstances. The rapid changes brought about by uncertain times can create a sense of urgency and a need for rapid decision-making, which can be challenging for organizations to navigate. Additionally, during uncertain times, individuals and organizations may be more resistant to change, as they are already coping with a high level of uncertainty and insecurity. This can make it more difficult to implement new processes, procedures, and technologies. Furthermore, the lack of predictability in uncertain times can make it difficult for organizations to plan, which can also impede change management efforts.

This thesis aims to examine the impact of the COVID-19 pandemic on organizations and their employees, focusing on the ways in which organizations adapted to the sudden shift towards remote work. The study utilizes change management models, specifically Kotter's 8 step model and Hiatt's ADKAR, both based on Lewin's model, to investigate their effectiveness and reasonability during the transition period. The thesis also explores the impact of remote work on employees and how it affected their lives.

The study aims to provide insight into how organizations can effectively manage change and support employees during uncertain times such as the COVID-19 pandemic.

1 INTRODUCTION

Prior to the 21st century, business literature facing global businesses primarily focused on how to mitigate business failure. Much of this topic was based on two fundamental assumptions: the increasing primacy of markets and the global business ecosystem (Amankwah-Amoah et al., 2021). This means that business literature focused on how businesses can operate successfully within market-oriented economies but did not consider external factors that could have a significant impact on the business ecosystems. With the emergence of the 21st century, the business environment has become more complex and uncertain, with an increasing number of global challenges such as pandemics, economic downturns, and climate change, that can have a major impact on business operations.

It is not surprising that past studies on business failure have largely overlooked the impact of extreme environmental shocks and "black swan" events such as those caused by the COVID-19 pandemic and other global crises (Amankwah-Amoah et al., 2021). This is because these types of events are considered rare and unpredictable, and consequently they may not have been studied as extensively as more common or ongoing issues within the field.

Therefore, literature on the business failure and remedies needs to adapt and consider these new factors (Boso et al., 2019; Mellahi & Wilkinson, 2004; Rider & Negro, 2015)

The selection of change management as a research topic considering the COVID-19 pandemic is a logical choice as it allowed to study the impact of the pandemic on organizations, how they adapted to the changes it brought about and how employees adjusted to the new situation. Change management is the process of preparing, supporting, and helping individuals, teams, and organizations make organizational change.

While this thesis was written, we found ourselves – *still* going "… through a rather extraordinary spike in uncertainty, change, and volatility by the COVID-19 pandemic", (Kotter et al., 2021, P. 3).

A "pandemic is not a term to use carelessly, but if misused, causing unreasonable fear, unjustified acceptance, leading to unnecessary suffering, aimlessness, chaos, and loss (Tedros, 2020) which we all in one way or the other experienced. The dictionary of epidemiology finds the term described as follows: "A pandemic is an epidemic occurring on a scale that crosses international boundaries, usually affecting people on a worldwide scale" (Porta, 2014, p. 376) – and so it did in 2020. From a historical perspective since 430 BC with the plague of Athens (Littman, 2009) to the second plague pandemic in Europe in 1348

(Spyrou et al., 2019), then from the Black Death to the great influenca pandemic, also known as the Spanish flu (Tsoucalas et al., 2016) the world has been dealing with deadly diseases for a while and only recently human population plunged again into uncertain times through the outbreak of COVID-19. A positive-sense RNA virus (Ge et al., 2020) that emerged of the novel SARS CoV-2 virus.

By the end of 2019, multiple cases of pneumonia with unknown cause occurred in Wuhan, Hube Province in China with most patients having a contact history with the Huanan seafood market (Huang et al., 2020). Subsequently more patients appeared with fever and cough symptoms. A novel corona virus was identified on 7 January 2020, through a throat swab sample of one patient by the Chinese Center for Disease Control and Prevention, and was subsequently given the name of 2019nCoV by World Health Organization (WHO) (Zarocostas, 2020). The virus infection crossed the infection point week of February 24th and within days infections outside China exceeded the ones within – 54 countries reported infections by February 29th (Craven et al., 2020).

The virus spread rapidly across the world (Wang et al., 2020) with little or no impact to some versus death of millions of others. The WHO announced a global public health emergency of international concern (PHEIC) and on March 11th of 2020 declared that outbreak as a global pandemic (Cucinotta & Vanelli, 2020; Zarocostas, 2020). From one day to another uncertainty and unpredictability at all different levels started to unfold fast.

At the same time the world's economic development halted abruptly and is only slowly recovering: In January 2022 the World Bank published their yearly report on Global Economic Prospects (World Bank, 2022) and states that inflation, political uncertainty, financial policies in uncharted territory and administrative spending, rises inequality and security challenges.

Looking back prior March 2020, businesses processes, operations and our world of work were rapidly transforming. We were in the middle of the Fourth Industrial Revolution, 4IR or also Industry 4.0 "beget with emergent and disruptive intelligence and information technologies (Bai et al., 2020, p. 1) enabling ever-improved levels of efficiencies through the help of big data, analytics and simulation, artificial intelligence, cloud storage, blockchain technologies and the industrial internet of things (Dalenogare et al., 2018). Competitiveness, growth, and tremendous innovation defined the order of the day. Back in January 2020, multi-brand car and truck maker Volkswagen Group's CEO Herbert Diess raised with his senior management the following statement "The big question is: Are we fast enough? … If we continue at our current speed, it is going to be very tough." (Taylor, 2020).

The COVID-19 pandemic accelerated the shift towards remote work and digitalization of many industries. While some companies had plans in place for business continuity, the sudden and widespread nature of the pandemic caught many off guards and required a rapid shift to remote work and other forms of digitalization. This has led to significant changes in the way we work, including an increase in remote and hybrid work models, and has had a major impact on the workforce and the economy.

Many researchers (Caramela, 2021; Choudhury, 2020; Junnaid et al., 2020) rise the importance of change management, especially in such situations where organizations are (were) confronted with COVID-19. The necessity to understand the importance of change management and their models to sustain is crucial for organizational survival. An uncertainty in form of the recent pandemic has upended not only personal daily life (Collins, 2020), but also operational processes. Whilst reflecting to the first quarter of 2020, vanilla strategies (Kim & Mauborgne, 2014) did not work. Classic change management was turned upside down without required technology in place and one saw a need to build and utilize a rapid cycle change model to prepare for a variety of scenarios (Balluck et al., 2020).

However, such change management models also require considering the human involvement through the employees as well (Collins, 2020; Hobsbawm, 2021; Jackowska & Lauring, 2021). We observed that many employees did in fact not need to be co-located with their colleagues on-site to perform their job responsibilities. Entire workforces, teams or even individuals can operate well while being entirely distributed (Choudhury, 2020). "The pandemic has pitched the world of work from one already undergoing a seismic change – what the World Economic Forum in 2016 called the fourth industrial revolution of "cyber-physical systems" - into a new revolutionary convulsion, in which as many as one third of people say they never want to go back to work full-time in an office", (Hobsbawm, 2021, p. 7).
COVID-19 triggered an eruption of issues which had been building up within work life and forced an open mindset of senior leaders to the idea of adopting swiftly work from home possibilities which they did not do prior to the lockdowns.

1.1   Research Questions and Hypotheses
The purpose of this paper is to investigate and assess the effects of certain change management models on the transition from working in an office to working remotely

initiated by the COVID-19 pandemic. The paper aims to evaluate how these models supported the shift and what impact they had on the process, identify the key steps in the change process that were most effectively implemented, those that were overlooked, and those that were essential to maintaining productivity, growth, and motivation among the remote workforce in a working from anywhere scenario.

In addition, it seeks to provide information on how leadership can better prepare for and respond to similar crises in the future, and how to effectively manage and support employees during the transition process.

The hypothesis statements have been developed based on previous scientific research of the author and a thorough review of existing literature in the field or research of this thesis.

The literature framework helped to establish the context and significance of the research and provided a theoretical background for the study to situate this work within the existing body of knowledge. It helped to identify gaps in the existing knowledge and formulate measuring questions that address these. The underlying literature refers to preceding scientific research and studies on similar topics that will inform and support the current research. They formed the necessary foundation of the questionnaires. The literature was aligned to each measurement of a question to then provide insight towards available scientific concepts.

The coding of hypotheses, measurements and relating questions is H for hypothesis, M for measure and hyphen a number the relating question. Each hypothesis consists of multiple measurements (questions) which have literature background and are displayed in the following tables.

1.1.1 First research question and hypothesis

Organizations can foster relationships and nurture employee mental health by implementing policies and programs such as flexible work arrangements, employee assistance programs, and mental health benefits. Additionally, leaders can prioritize open communication and transparency to build trust and support among employees. Planning for an uncertain future can include scenario planning and contingency planning to identify potential risks and opportunities.

In early stages of any change process, it is important to drive awareness and desire for the change among stakeholders (Hiatt, 2006; Kotter et al., 2021). This can be achieved through effective communication and creating a sense of urgency around the need for the change.

To plan for an uncertain impact or future and drive growth, organizations can focus on building a strong and agile workforce, investing in employee development, and training, and fostering a culture of innovation and experimentation. Creating a positive and inclusive company culture, where employees feel valued and respected, can also contribute to better mental health.

The question addresses gaps in present literature (Ahlstrom & Wang, 2021; Calder, 2013; Cameron & Green, 2019; Gallo, 2017; Hayes, 2022; Kotter et al., 2021; Perry, 2020; Pisano et al., 2020; Weick, 1988) on the correlation of culture and change process during a pandemic and the impact of the individual towards a successful change during such an uncertain scenario. Weick already raised in (1988, p. 305) "[…] action that is instrumental to understanding the crisis often intensifies the crisis", but neglecting a potential additional impact through culture. During the first year of the pandemic early considerations about organizational impact on change raised among researchers (Amis & Greenwood, 2020; Chowdhury, 2017; Lawrence, 2020). Obrenovic et al. (2020, p. 17), "Organizations that are increasingly departing from traditional management culture and sustainability models towards the culture of agility, flexibility, and resilience are able to sustain business operations".

This first research question (table 1) aims to close the gap in literature on what has been done from an organizational perspective to prepare and transform, but also how collaboration was managed through the early stages of the change process during the impact of the COVID-19 pandemic.

Table 1: First research question and hypothesis H1

1st	Research Question	How can organizations foster relationships and nurture their employee's mental health while also planning for an uncertain future and drive growth?
	Hypothesis H1	A change management approach requires two perspectives, (1) an organizational perspective (how groups can be managed through a change) and (2) an individual perspective (how people experience change), which require parallel focuses during the process to sustain both workforce health and successful business transformation.

Measurement	Questions #	Sources
M1 | Organizational change impact	1. Is the presence of a strong organizational culture indicative of success in driving organizational change? 2. Do you know of any plans your organization has in place to mitigate resistance to change? 3. Have there been change teams ("champs") in place to help you through organizational change? 4. Has your leadership shared with you any short-term wins (e.g., facilitation of business continuity) through the stages of transition?	(Bourne et al., 2003) (Burke, 2017) (Burnes, 2004) (Dijesh & Mary, 2017) (Eccles, 1994) (Galli, 2019) (Goss & Pascale, 1993) (Graetz, 2000) (Hiatt, 2006) (Kotter, 1996, 2019; Kotter et al., 2021; Kotter & Cohen, 2012; Kotter et al., 2006) (Kouzes & Posner, 1993) (Moran & Brightman, 2001) (Morton, 2016) (Northouse, 2021) (Paton & McCalman, 2008) (Rieley & Clarkson, 2001) (Senior & Fleming, 2006) (Whelan-Berry et al., 2003)
M2 | Individual change impact	1. Have you ever been involved in consultation or a decision-making processes during any organizational change? 2. Do you think management should communicate rational and requirements of a change process from the moment planning begins? 3. Did your organization provide you with helpful processes and tools to continue your work from home during the 1st lockdown of the Covid-19 pandemic?	

Source: Own illustration

Two measures (M) provided input on the stability of H1 (table 2). Measurement H1M1 is focused on understanding the leadership strategies and actions used to implement a change within an organization, while Measurement H1M2 is focused on investigating how collaboration was managed between individuals, regardless of their role as leaders or members of the workforce.

Table 2: Hypothesis 1 measurements

Measurement H1M1	Targeting change from an organizational perspective trying to address the topic of leadership, what they have done and to prepare and drive through the change process.
Measurement H1M2	Focuses on the individual person and how they observed the change process and contained three survey questions.

Source: Own illustration

1.1.2 Second research question and hypothesis

The amount of flexibility in workforce management that leadership has during uncertain times can vary depending on the organization and its specific circumstances. However, leadership may have the ability to implement various measures such as layoffs, furloughs, and salary reductions to manage costs during difficult times.

- Aiming to address the middle steps of the change models: Kotter's 5th step is called "empowerment" (Kotter, 1996) and Hiatt fifth is "K" for knowledge (Hiatt, 2006). Empowerment in the context of change management refers to giving individuals and teams the authority and resources they need to take ownership of the change and make decisions related to it. In a forced change situation, the level of empowerment may vary depending on the specific circumstances and how the change is implemented. If the workforce is not adequately empowered and motivated, they may feel dragged down by the change and resist it, which can impede the success of the transition. On the other hand, if they are empowered and motivated, they may be more likely to embrace the change and work towards making it successful.

- Knowledge also plays important role as employees need to have enough information and understanding about the change, its impact and the steps required to achieve the desired outcome. Clear communication and training can help to ensure that employees have the knowledge they need to successfully navigate the change.

The second research question (table 2) addresses gaps in present literature on empathic leadership approaches and not managing teams through critical times (Bass, 1985; Bass & Avolio, 1994; Davis, 2019; Ferrazzi & Weyrich, 2020; Hobsbawm, 2021; Holt, 2022; König et al., 2020; Yang et al., 2022). Current literature (Choudhury, 2020; Suzman, 2020) also misses guidance or best practice models on how to support the workforce in a remote work situation.

Table 3: Second research question and hypothesis H2

2nd	Research Question	How much flexibility in workforce management does leadership have during transitioning through uncertain times?
Hypothesis H2		People and teams must be supported by management with empathy and optimism, which will foster focus on what can be controlled as opposed to being consumed by chaos.

Measurement	Questions #	Sources
M1 | Optimism	1. During Covid-19 lock-downs (remote work), did your team celebrate success at work? 2. Did you have flexibility to organize your work time while working from home?	(Ainscow, 2007) (Balluck et al., 2020) (Bass & Avolio, 1994) (Bekmukhambetova, 2021) (Carnall, 2007)
M2 | Support	1. Were you motivated by your manager to continue to perform well in your job during the pandemic? 2. How viable did your manager perceive working from home?	(Covey, 2013) (Craven et al., 2020) (Cummings et al., 2016) (Eccles, 1994) (Galli, 2019) (Hiatt, 2006)
M3 | Development	1. While working from home, did you learn any new skills that helped you accomplish your work better? 2. Do you think that videoconferencing platforms (like ZOOM, WebEx, or TEAMS) have improved overall workplace collaboration?	(Hiatt & Creasey, 2003) (Holland, 2000) (Ibeawuchi et al., 2021) (Kotter, 1996, 2019; Kotter et al., 2021; Kotter & Cohen, 2012) (Northouse, 2021) (Pugh, 1993)
M4 | Empathy	What behaviors were displayed by leadership during the initial stages of the change process (Covid-19 impact)? Options: Options: appreciation, empathized with my experience, saw the world from my perspective, broad confusion, social distance, self-centered	(Rees, 2018) (Rieley & Clarkson, 2001) (Sarayreh et al., 2013) (Schein, 2010) (Sveningsson & Sörgärde, 2019) (Talmaciu, 2014) (Yukl, 2012)

Source: Own illustration

Four measures provided input on the stability of H2: optimism, support, development, empathy. Again, each measure includes a set of questions, as shown in table 2, that were used to assess the level of the measure being studied.

These questions were then used to gather data and provide insight on the stability of H2.

Table 4: Hypothesis 2 measurements

Measurement H2M1	Is investigating the level of optimism while working remotely and the empowerment of employees in their home or anywhere offices.
Measurement H2M2	Focuses on the looks the manager/leader support mechanism during the time away from the office.
Measurement H2M3	Targets personal employee development and collaboration.
Measurement H2M4	Investigates the emotional side of leadership and how empathy was acted upon or not.

Source: Own illustration

1.1.3   Third Research question and hypothesis

It depends on the organization, in reality many organizations are not equipped and structured to deal with challenges of the future as they do not have a long-term vision or are not agile enough to adapt to the ever-changing environment. But organizations that prioritize forward-thinking and regularly assess their readiness for potential challenges are more likely to be better equipped to deal with the future.

The third hypothesis (table 3) is forward-looking and considers an organization's ability to adapt to new work scenarios. It is also potentially more thought-provoking than the previous hypotheses as it raises questions about the organization's future and ability to evolve.

The third research question aims to address gaps in present literature on the new way of remote or hybrid work scenarios (Dodd, 2020; Gratton, 2020; Hobsbawm, 2021, 2022; Newport, 2020; Seabrook, 2021) and the mental impact on employees (Choudhury, 2020; Mehrolia et al., 2020; Orbach, 2008; Tandon, 2020), as well as a potential change of culture.

Table 5: Third research question and hypothesis H3

3rd	Research Question	Are organizations adequately equipped and structured to deal with challenges of the future?
Hypothesis H3		The transformation to the nowhere office is inevitable.

Measurement	Questions #	Sources
M1 |The new way of work	1. Is it possible to have a better work-life balance while also working productively from home? 2. Can the home office provide something of a reset to workplace stresses and challenges? 3. Working from home in the pandemic era: did you experience a loss of mental equilibrium (balance)? 4. Have you been encouraged by your management to continue to work from home (hybrid workplace)?	(Bennis & Nanus, 1985) (Chattopadhyay, 2021) (Choudhury, 2020) (Connley et al., 2020) (Da et al., 2022) (Felstead & Henseke, 2017) (Gaivoronskaya et al., 2021)
M2 |Individual changes	1. What happened when you started to work from home during the first Covid-19 lockdown? Options: ▪ transformation of your home sphere ▪ health issues (loneliness, anxieties, physical issues, etc.) ▪ more meetings online than before ▪ social network increase 2. Will you continue working from home? Options: not sure, no, hybrid approach, 100% work from home	(Gajendran & Harrison, 2007) (Hiatt, 2006) (Hobsbawm, 2021, 2022) (Ibeawuchi et al., 2021) (Jackowska & Lauring, 2021) (Kelliher & Anderson, 2008) (Kourti et al., 2021) (Leighton & Gregory, 2011) (Maital & Barzani, 2020) (Mehrolia et al., 2020) (Minkler et al., 2021)
M3 | Organizational changes	1. Was your supervisor immediately able to enable you to work remotely? 2. *Has your supervisor closed the gap of different IT skills between employees by now?* *This is a question about using conference tools, presentation and collaboration skills when working remotely.* 3. Did your supervisor cultivate a (more) digital culture which the team/organization now continues?	(Molino et al., 2020) (Orbach, 2008) (Parent-Lamarche & Boulet, 2021) (Piquero et al., 2021) (Rafferty & Griffin, 2006) (Shin et al., 2012) (Strebel, 1992) (Suzman, 2020)

Source: Own illustration

Hypothesis H3 will be tested with three measurements and again each contained a set of questions (table 6) for scoring.

Table 6: Hypothesis 2 measurements

Measurement H3M1	Analyses the new way of working – anywhere or at home, but the office. It looks at work life balance, domestic loss of mental equilibrium and if there is leadership support to continue from the new environment.
Measurement H3M2	Reflects at the individual person changes when they started working away from the office and if they will continue.
Measurement H3M3	Looks at the organizational changes this workplace shift brought along

Source: Own illustration

1.2 Research Challenge

The COVID-19 pandemic was an unprecedented event and made it difficult to compare findings of this study to a baseline of earlier research. As this work will be based on data collected during the pandemic, it limits the ability to compare it to previous situations. The research will instead focus on identifying patterns or learnings from the data, but it will not be able to identify areas of improvement as there is no previous experience to compare it to. The findings and recommendations can be used as a reference point for organizations, employees, and the society to be better prepared for future unforeseeable events.

Another research challenge are ethical considerations:

- Avoiding potential harm to participants: minimizing any negative impacts of the research on participants and taking steps to mitigate any harm that does occur.
- Addressing cultural and power imbalances: recognizing and addressing any potential biases or power imbalances that may arise due to differences in culture, language, or socioeconomic status.
- Being sensitive to the cultural, environmental, and social context of the research: considering the specific context in which the research is being conducted and being respectful of local customs, traditions, and beliefs.

Ensuring that research is conducted ethically is essential to maintaining public trust in the scientific enterprise and ensuring that the benefits of research outweigh any potential harms.

1.3 Structure of this paper

The composition of this dissertation is divided into five parts.

- The first part is the introduction, providing background information, which is the transition from working in an office to working remotely through the impact of a pandemic. It will set the stage by providing context and purpose of the research.
- The second chapter is about the performed literature analysis:
  - It lays out the theoretical foundations of change management. This part will explain the three models that are the focus of the research: Lewin's model, Kotter's 8 Steps for Leading Change, and the ADKAR model. It will identify the challenges of each model, differentiate them, and identify areas of synergy between them. This will provide a theoretical background for the rest of the paper and help to understand how these models approach change management and support the transition from working in an office to working remotely.
  - Then it will provide a critical comparison of the opportunities and challenges of working from home and hybrid work structures. It focuses on the "tipping point" of the new world of work and how it has impacted the transition from working in an office to working remotely. It will examine the positive and negative aspects of working from home and hybrid work structures and provide a detailed analysis of the opportunities and challenges that have arisen from this shift. This chapter will help to understand the implications of this change on the organization, employees, and society.
- Chapter three will provide insight on the synopsis of the research analysis, explaining the approach, statistical methods, and challenges.
- The fourth chapter of the research paper is the empirical part of this thesis. This chapter will include information on the research approach, design, methods, and results used to validate and respond to the research questions. It will provide a detailed description of how the research was conducted, including the methods used to collect and analyse data, as well as the results of the study.
- Chapter five will present the results of the research, potential scientific gaps, but also new statements. This chapter will summarize the findings of the study, draw conclusions about the effectiveness of different change management models in supporting the transition from working in an office to working remotely. It will also

identify areas where further research is needed to deepen our understanding of the topic and will provide new theses as an outcome of the research.

- The final part of this paper will be the conclusion. It will summarize the main findings of the research on new work-life approaches and their impact on productivity and culture. It will also reflect on the lessons learned from writing this thesis.

2 LITERATURE ANALYSIS

Uncertain times refer to periods of unpredictability and instability, characterized by a range of potential scenarios such as natural disasters, war, economic crises, or pandemics. These times of uncertainty can be impactful for change management as they bring significant challenges for individuals and organizations, they may need to adapt quickly to rapidly changing circumstances and navigate the unknown. They can also lead to increased stress, anxiety, and uncertainty for individuals, as well as economic, social, and political instability. However, before any change management can take place, organizational culture needs to be taken into consideration as having a significant impact on how organizations respond to uncertain times such as a pandemic. This is deeply explained through many scholars such as Edgar H. Schein (2010), who examined how culture shapes an organization's response to change and uncertainty. Kahneman (2012) who discusses how organizational culture and leadership can shape the decision-making processes of employees and how it can impact the performance of the organization or Hamel (2002) who investigates the importance of organizational culture in fostering innovation and adaptability.

A strong, positive culture can foster resilience and adaptability, allowing an organization to quickly pivot and make decisions in a rapidly changing environment. On the other hand, a negative or rigid culture can hinder an organization's ability to respond effectively to a crisis. In terms of organizational theory, contingency theories suggest that the most effective approach to dealing with uncertainty is to be flexible and adaptable (Kotter, 2008), to be able to switch strategies as the situation changes. This aligns with a positive organizational culture. Additionally, some theories suggest that during times of crisis (Deming, 2018; Drucker, 2012; Nutt, 2003), leadership becomes even more important, as leaders play a key role in shaping the organization's response and guiding employees through the crisis. Clear and effective communication from leaders (Kotter, 1996) can also help to mitigate the negative effects of uncertainty on employees.

Overall, it is important for organizations to have a culture and approach that encourages adaptability and effective leadership to navigate uncertain times such as a pandemic.

Navigation and reaction through uncertain times requires specific approaches, such as: crisis, risk, and change management. All three are related in a way as they involve identifying, assessing, and responding to potential negative impacts on an organization or community and play important roles in ensuring the success and stability of an organization.

- Crisis management is focused on dealing with unexpected events that have already occurred and require immediate action to minimize harm (Coombs & Holladay, 2022; Mitroff et al., 1987). During the COVID-19 pandemic crisis management required a public health approach (Abbas, 2021), including measures to track and control the spread of the disease, and providing medical care and support to those who are affected (Sharma et al., 2022).

- Risk management is focused on identifying and assessing potential threats before they occur and implementing measures to mitigate or prevent them (Crouhy et al., 2006; Hopkin, 2018; Murray-Webster, 2010). This process focuses on the threat, which in the case of the pandemic was of medical origin.

- Change management is focused on managing the impact of changes (Hayes, 2022; Kotter, 1996), whether they are planned or unplanned, on an organization or community.

In an uncertain situation, it is important to first assess the situation and determine if it constitutes a crisis or if it is a potential risk that can be managed proactively. Depending on the situation, a combination of crisis management, risk management, and change management may be required to effectively respond to the situation.

Choosing to focus on change management over crisis and risk management in this thesis was because organizations had to undertake major changes, such as implementing new technologies or processes, or even restructuring their setup during the pandemic. Under normal circumstances, if an organization facing a sudden crisis, the priority would be to handle the crisis and minimize the harm (Crandall et al., 2013), rather than focusing on change management. Similarly, if an organization is identifying and assessing potential risks, the priority would be to mitigate or prevent them (Crouhy et al., 2006) rather than focusing on change management.

The transformation from a defined (current) state to another unknown, but desired state (Galli, 2018; Hayes, 2022; Hussain et al., 2018) can be understood as a principal definition of change. It correlates to the intention of any institution or organization to develop and become successfully competitive long term which makes change an omnipresent part of institutional and/or organizational life, on the strategic as well as on the operational level. In recent years such continuous transformations have become a challenging quest to accomplish for individuals, teams and organizations involved. This is not only in regards of

consumer innovation or increased levels of customer satisfaction requirements, but also about increasing social, political, and economic context and influences within and where an organization operates (Reim et al., 2015).

Progress and development through evolution is regarded as a constant aspect of nature, change and especially the competence of change management in organizational life has become considered a required and core competence (Burnes, 2004c; Moran & Brightman, 2001; Pawar & Charak, 2017). Moreover, multiple researchers (Burnes, 2004c; Kotter, 2019; Rieley & Clarkson, 2001) point out that organizational change cannot be disconnected from strategy, as without change there is no strategy forward. Without understanding these needs and abilities, and further categorizing them as strengths and weaknesses, any progress or economic evolution is out of scope.

Managing change with all characteristics from defining, planning, implementing, measuring, controlling and adjusting has been described by Moran and Brightman (2001, p. 111) as "the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers". Graetz (2000, p. 550) even goes a step further including the organizational environment in the definition and stating "against a backdrop of increasing globalization, deregulation, the rapid pace of technological innovation, a growing knowledge workforce, and shifting social and demographic trends, few would dispute that the primary task of management today is the leadership of organizational change". Taking all these dimensions into consideration an organizational transformation effort becomes an overly complex and multilevel facing, but not only from a process point of view, but also taking the human reaction into the calculation: high degree of scepticism, hesitancy, or lack of enthusiasm of involved employees and stakeholder, etc.

2.1   Theoretical foundations of change management

Change management can become a very wide area of research, therefore limiting the scope to ensure clarity and to limit intervention into and with other especially social sciences, Burnes (2004c) separates his approach to change management theory into three levels: the individual perspective, the group dynamics and the open systems school.

- The individual perspective school looks at change through the individual perspective, but with two different approaches, characterized by Behaviourist and Gestalt-Field psychologists.

- In behavioural theory, all behaviour is learned (Pavlovian response), meaning rewarded behaviour is likely to be repeated, consequently unrewarded is not. Concluding that changing behaviour is conditional on changing conditions that trigger it.

- Gestalt-Field psychologists represent the opinion that behaviour results from how an individual interprets external stimuli and not only a product of it. Therefore, to initiate change, "... the Gestalt-Field proponents seek to help individual members of an organization change their understanding of themselves and the situation in question, which, they believe, in turn will lead to changes in behaviour" (Burnes, 2004c, p. 174).

- The group dynamics school emphasizes team or group dynamics, arguing that the individual level is influenced by the overall team or group and acts as a function of the group environment or field (Lewin, 1947). In other words, any interaction within a group i.e., group dynamics or forces influences individual behaviour. Therefore, the focus of this school in regards of change is influencing group norms, roles and values.

- The open systems school looks at the whole organization, being exposed not only to internal sub-systems but also external environments which can compromise the overall organizational entity. Change here "is conducted through understanding and manipulating the subsystems so that the organization functions better overall and adapts to the environment in which it operates", (Bourne et al., 2003, p. 248)

Based on these three perspectives, considering the wide range of impact of academic research including strategy, psychology, and sociology to change management becomes obvious. Researchers often combine different perspectives in their studies of change management. For example, Strebel (1992) combines the individual perspective with group dynamics, while Dawson (1994) combines group dynamics with the perspective of open systems. Additionally, some researchers argue that for successful change management, all three levels (individual, group, and organizational) must be addressed (Morton, 2016; Paton & McCalman, 2008). Such approaches can make a structured approach rather difficult, therefore it is wise to consider the diversity of fundamental theories and share the diversity of theories and perspectives can make it difficult to develop a structured approach to change management. To address this, some researchers recommend taking a more holistic approach and considering the impact of various perspectives on the change process. One example of this is Bourne's (2003) approach, where he emphasizes the importance of reviewing the

impact of different perspectives and evaluating their relevance to the change approach. This allows practitioners to better understand the complexity of change management and to develop more effective and tailored strategies.

Another level to differentiate looking at organizational change – described to be the process in which an organization shifts its current structure, routines, strategies, or culture that significantly impact the organization (Herold et al., 2008) – is that it can either be a planned or an unplanned change depending on specific trigger(s) and purpose (Malopinsky & Osman, 2006).

In this aspect Stolovitch and Keeps (2006) explain planned change when business operations analysis identifies a defect that requires improvement, it then involves systematic and controlled change to help an organization to continuously improve performance and effectiveness.

Unplanned change is on the other hand impacted by an unexpected external force and happens serendipitously due to a challenging a situation in the organizational environment which threatens to unsettle organizational business processes (Shaw, 2018).

One more method to analyse change has been done be several researchers (Bourne et al., 2003; Paton & McCalman, 2008; Senior & Fleming, 2006) by split change strategies even further: into soft and hard system models of change.

- Hard systems models originated in the field of operations and systems management (Mayon-White, 1993) assuming that logic and rationality support change objective development and their later achievement. This results in a three-phase rational change model (figure 1) and includes a definition, evaluation and implementation phase clearly structured with process steps and reiterations and specific stages of the desired stage versus the environmental development.

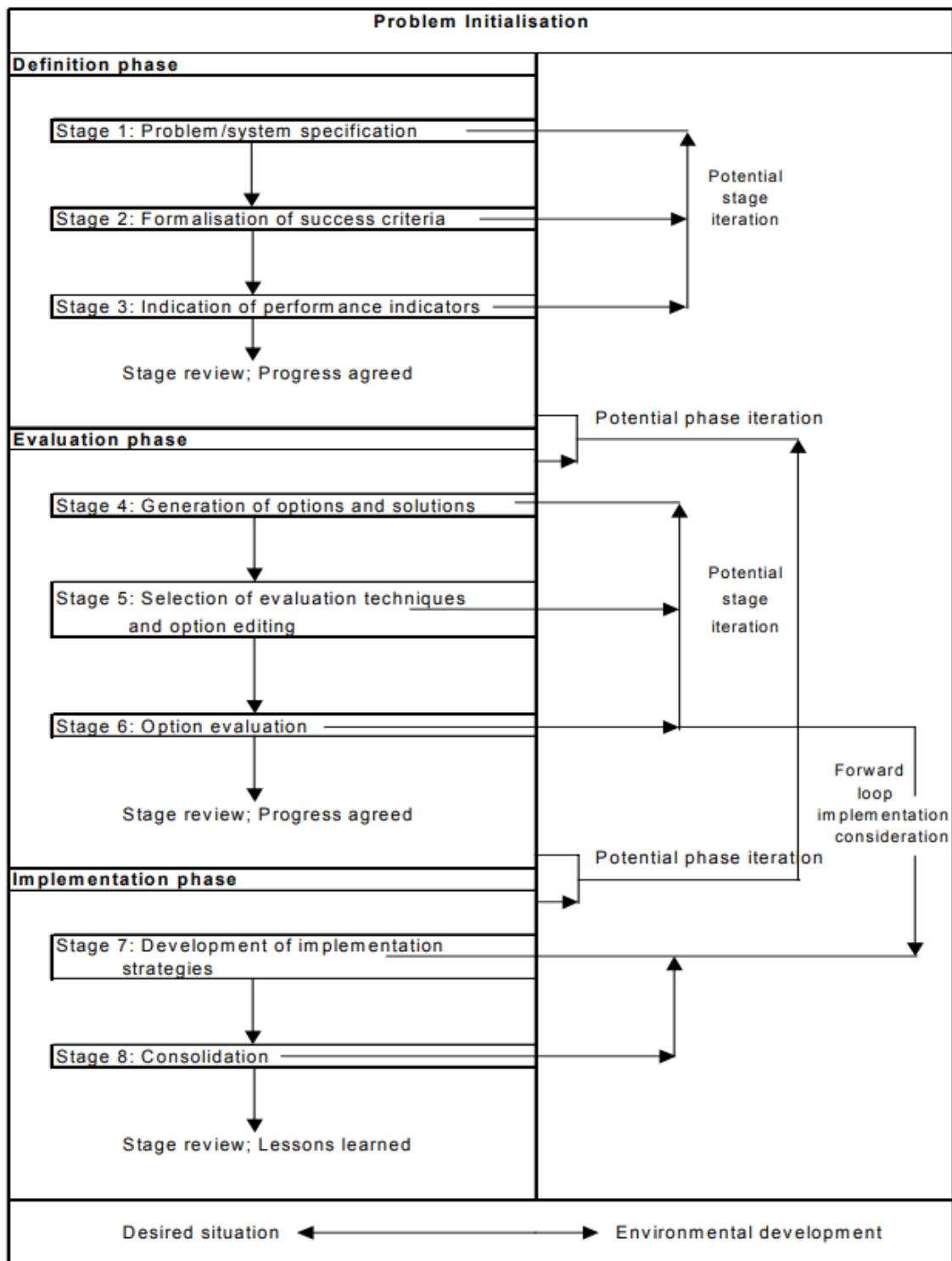*Figure 1: Three Phase rational change model (Bourne et al., 2003, p. 250)*

- The soft systems model approach explains that any challenge can be rationalized. "Organizational development is about changing the organization from one situation, which is regarded as unsatisfactory, to another by means of social science techniques for change" (Paton & McCalman, 2008, p. 129). Individuals such as employees

become the center of attention in this approach when being encouraged through social science techniques to provide feedback on the change process and outcomes and is being constantly modified to develop (Senior & Fleming, 2006), a dynamic approach. Figure 2 shares the view of an organizational development example where each arrow represents the continuous reiterations of phases during the change process, in other words the readjustment of the situation and approach.
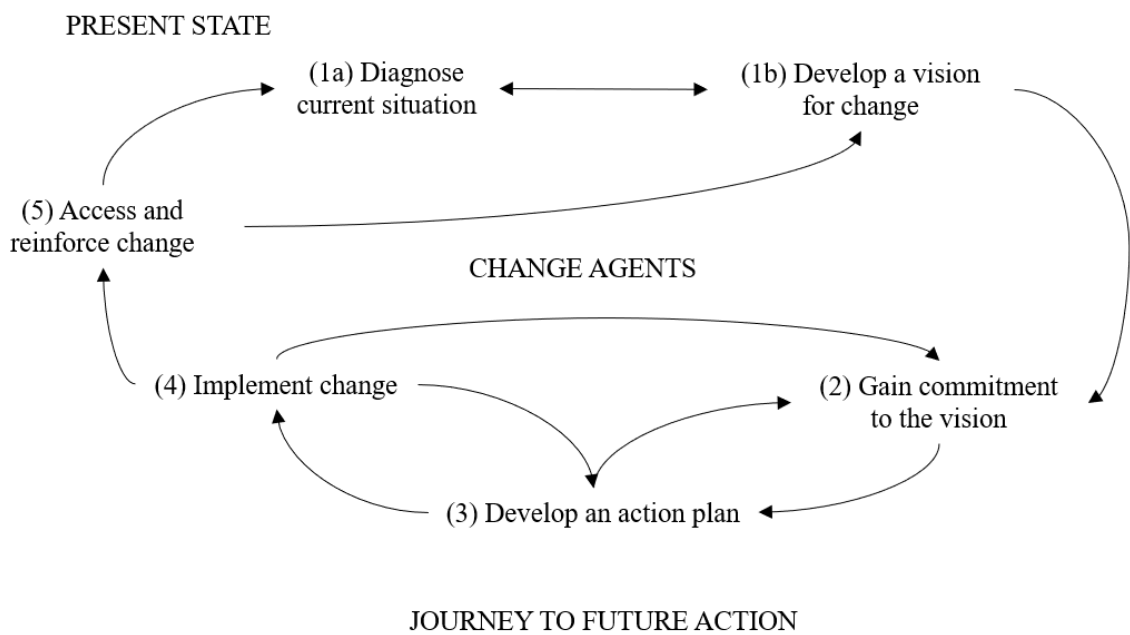
PRESENT STATE

(1a) Diagnose current situation

(1b) Develop a vision for change

(5) Access and reinforce change

CHANGE AGENTS

(4) Implement change

(2) Gain commitment to the vision

(3) Develop an action plan

JOURNEY TO FUTURE ACTION

Figure 2: Organizational change process (Senior & Fleming, 2006, p. 266)

Some researchers contend the suitability of these change models (Burnes, 2004c), as an example Paton and McCalman (2008) raise that the approach needs to be selected based on: first the problem's complexity and second the intensity of interaction between the new system's requirements and its individuals interacting in and with it. These researchers favour an approach with the support of the hard systems model when complexity and intensity are low.

In reality these two approaches are a pair, as for a successful change process one cannot lose sight of the rational objectives ahead, challenges present, but should also not dismiss people being involved (Hiatt, 2006) to increase the chances of success (Bourne et al., 2003).

2.2 Management approaches

Managing a change project is never a vanilla strategy (Kim & Mauborgne, 2014) approach. Assessing the status quo of an organization can provide multiple perspectives and reveal potential challenges in achieving objectives. Time constraints, lack of flexibility and a need for strong communication skills can also hinder progress in the face of changes and existing threats (Meaney & Pung, 2008).

Change also requires adjustment of an organization's central operations cohort, it triggers a series of different novel events with then a possibility of the exposure of weaknesses and uncertainty and treats (Rafferty & Griffin, 2006). Strebel (1992) mentions that change is in general neither wanted nor welcomed. It upsets through disruption the overall equilibrium of an environment.

When trying to justify the necessity for change (before it starts) modern change management literature shares the following areas of interest to consider:

- To legitimize the need for change (Burnes, 2004c; Eccles, 1994; Kotter, 1996, 2019; Kotter et al., 2021; Paton & McCalman, 2008; Pugh, 1993)
- To create a shared vision (Kotter, 1996; Kotter et al., 2006)
- To activating a change team (Goss & Pascale, 1993; Kotter, 1996; Schech-Storz, 2013)
- Wide communication of the change (Eccles, 1994; Hiatt, 2006; Lowery, 2010)

Each of the above perspectives can be found in any practical real-life change management activity and the importance in them is to not neglect their significance of impact when beginning a chance project or process.

Although there is much disagreement in approach, models and considerations before a change actually begins, there is one significant agreement across many researchers – that change comes with resistance (Eccles, 1994; Kanter, 2003), which makes management commitment so essential. In regards of commitment, Kotter (1996) highlights the importance to create a sense of urgency to support the development of a guiding coalition within top management. This does require strong support through leadership actions i.e., behaviour, communication and guiding policies (Duck, 1993; Kotter, 2019).

Raising quick wins and sharing these broadly for supporting the change transformation (Eccles, 1994; Holland, 2000) is as important as managing the usual casualties as part of the process. Encouraging impacted individuals to express their objections throughout the process (Pugh, 1993) and avoiding them going quiet and underground through effective content management (Goss & Pascale, 1993) can help in avoiding resistance. Hence

throughout the process, change needs to be examined, evaluated and once completed and implemented performance and progress requires to be followed and tracked to ensure there is no fall back into old habits impacting the organization in a negative way (Burnes, 2004c; Cameron & Green, 2019; Pugh, 1993).

"Prescriptive management processes for introducing change are designed to create a strong coalition around a shared view of the future and dissatisfaction with the current status of the organization. This is sometimes combined with actions to reduce the resistance to change, although many of the techniques focus on communicating the reason why the change is necessary" (Bourne et al., 2003, p. 252).

2.3 Moving aspects of change

The basics of change mentioned in the previous chapter are rigid in nature. It is reasonable to assume that not all entered circumstances can ever be considered as equal. Consequently, not all such situations justify the same approach to change simply because principal environments are different, objectives, stakeholders and customers are different, and people involved.

One can assert that "due to varying factors internal to an organization's environment, not all changes are the same; therefore, management needs to use different change models and methodologies depending on the situation", (Schech-Storz, 2013, p. 20).

In recent years change management techniques have proved an innovative manifestation in global moving ecosystems and requires as per Dijesh and Mary (2017, p. 1351) a specific mindset, "…change is certain and managing change is mandatory". Pawar and Charak (2017) also highlight the increasing necessity to continuously adjust, implement and operate new practices in change practices due to environmental requirements and especially the speed of change impacting a business.

One can conclude that as the world is constantly changing, so are the requirements of change to any situation of an organization. We know that successful change management has been established as a prerequisite to endure and thrive in today's highly competitive and continuously evolving environment and global markets (Luecke, 2003).

However, research has shown that the success rate of organizational change projects is relatively low. There is substantial proof that about 70% of all organizational change initiatives fail (Burnes & Jackson, 2011; Decker et al., 2012; Todnem, 2005). This may imply of an absence of effective change management frameworks providing clear guidance on

planning, implementation and the management of change and as Strebel (1992) and Burnes (2004c) both declare. Today's change management suffers from a wide variety of contradictory and confusing concepts and methodologies rather than providing a straightforward, applicable, and developable approach. "Programs based primarily on the change drivers, ignoring the forces of resistance, are as prone to failure as those dealing primarily with the forces of resistance, ignoring the change drivers. What is needed is the choice of a change path based on a diagnosis of both the forces of change and resistance" (Strebel, 1992, p. 29).

Already Kurt Lewin (1947) demonstrated through his research on change and thinking process, an approach called force field analysis which displays tension between environmental changes and (psychological) resistance. By distinguishing between strong and weak forces of change as well as resistance, an equilibrium can be established in the benefit of the planned change process, or it remains in an unstable status until either force wins or gets balanced out. The approach to analyse moving parts in a change process through the forced field analysis has resurfaced in the past decades (Gaivoronskaya et al., 2021; Minkler et al., 2021), but little has been investigated to relate the forced field analysis to a specific selection of change paths (Strebel, 1992) in order to provide more insightful and solid guidance.

When dealing with complex, multi facing and layered change like in a pandemic, it is crucial to focus on identifying forces of change and resistance. "In organizations one cannot assume that everyone will agree with the assessment of the current position or that they will agree with the future scenario. This makes the transition problematic", (Bourne et al., 2003, p. 252).

Helpful is how Strebel (1992) categorized change approaches considering forces of resistance and different levels of support, based upon Lewin's force-field model (1947): strength of the forces promoting and resisting change (figure 3). The two axes display the level of resistance versus the force of change and provide an estimated scenario where and in what stage an organizational transformation is placed based on each force correlating with the other. This does not mean that the stage of change is firmly defined but helps to understand where weaknesses can be identified to move the process into a more promising position to drive the change process. By either toning the driving force or supporting more a weaker force a balance can be established.

Table 7: A contingent approach to change

Resistance	PROACTIVE	REACTIVE	RAPID
Closed to change	Radical leadership	Organisational realignment	Organisational realignment
Can be opened to change	Top-down experimentation	Process Reengineering	Process Reengineering
Open to change	Bottom-Up experimentation	Goal cascading	Rapid adaption
	Weak	Moderate	Strong

Change Force

Source: Own illustration based on: Strebel (1992)

In order to better understand the various types of impacting forces Strebel (1992, p. 30) categorizes three forms of them:

- "Established trends in the socio-political, economic, technological, competitive, and organizational environments.
- turning points that reflect the limits to the established trends (limits to the existing resources, capacity, investment, growth) and the stimuli promoting new trends (innovation, life cycle shifts, new players),
- internal change drivers in the form of organizational shifts, new managers, and change agents".

These three categories are significant to consider in any transition or transformative planning, as it tackles old habits, the tipping point when things become unbearable and internal energies. Only planning without taking into consideration the above three can become a timely and expensive endeavour. Each of them requires evaluation, and a mitigation plan to be included into the overall change process.

Strebel (1992) continues with his approach by placing these forces into four domains of change (table 7) and models how the interaction between them in these domains outcomes.
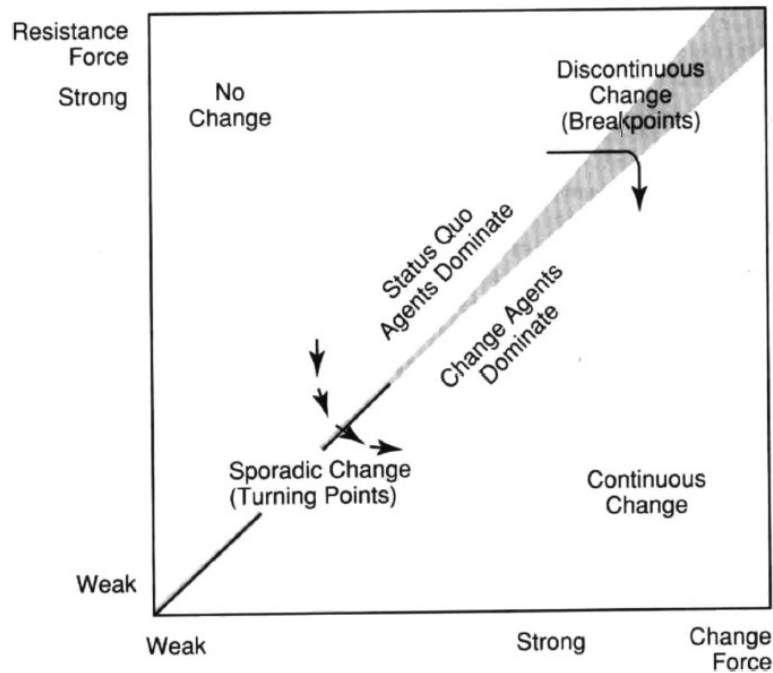
Figure 3: Change arena (Strebel, 1992, p. 32)

Each domain corresponds with one of these forces depending at which stage they are (strong or weak). The top left quadrant status quo prevails, no changes will occur, because of high resistance and weak changing force. However, bottom right displays the strong commitment to change and almost no, if any resistance. Any change will rapidly happen when the situation finds itself in this quadrant with relevant artefacts. The diagonal marking the boundary between status quo versus change agents (drivers). If the force of change continues to grow with low to zero resistance, it triggers the conversion of status quo supporters into change supporters and results in a turning point and the actual process of change begins (Strebel, 1992).

This approach helps clarifying and potentially even admitting to forces of change and present these in a comprehensive way to individuals or teams involved. It is important to understand the motion of change and its impacting forces i.e., drivers, to be able to establish a plan of a reactive change plan in order to transform into a new desired stage.

It is difficult to find a consensus on a "standard" approach of organizational change management (Hayes, 2022; Schech-Storz, 2013; Todnem, 2005). Researchers provide various topics of focus areas on change to dive into, for example legitimizing the need for change (Carnall, 2007; Eccles, 1994; Kotter, 2019; Pugh, 1993; Sveningsson & Sörgärde, 2019), establishing a shared vision and mobilizing a change team (Kotter, 1996) and

communicating the vision widely (Hiatt, 2006), and there is wide agreement on two criterias on this topic:

1) The speed of change in business environment is increasing year over year (Burnes, 2004c; Carnall, 2007; Kotter, 2019; Luecke, 2003; Paton & McCalman, 2008).

2) Change triggers come in all shapes, styles, and dimensions impacting any organization (Burnes, 2004c; Carnall, 2007; Kotter, 2019; Luecke, 2003) no matter if of global scope or not.

Early research on organizational change management suggested that organizations could not improve performance if they were constantly undergoing change. The idea was that too much change, or change that was implemented too quickly, could be disruptive and negatively impact organizational performance. However, more recent research has shown that organizations must continuously adapt and change to stay competitive and improve performance in the long-term. Rather than avoiding change altogether, organizations should focus on managing change effectively, through careful planning, clear communication, and addressing resistance to change (Rieley & Clarkson, 2001). Researchers claimed that organizations and their employees required first established routines to improve performance (Luecke, 2003). Nowadays as mentioned above researchers insist that continuous change is required to run an effective business and survive global market dynamics (Burnes, 2004c; Kotter, 2019; Kotter et al., 2021; Rieley & Clarkson, 2001).

2.4 Model selection

There are numerous change management models available and figure 4 only displays a few of many. However, it displays that they often are similar in approach, although with different background artefacts, such as control group, observations, science, or basic monetizing through consultancy.

In the next chapters the author will look at three change management approaches, starting first with Kurt Levin who is widely considered as having provided the foundation of change management. Then John P. Kotter's 8 Steps for Leading Change followed by the ADKAR model developed by Jeffrey Hiatt.
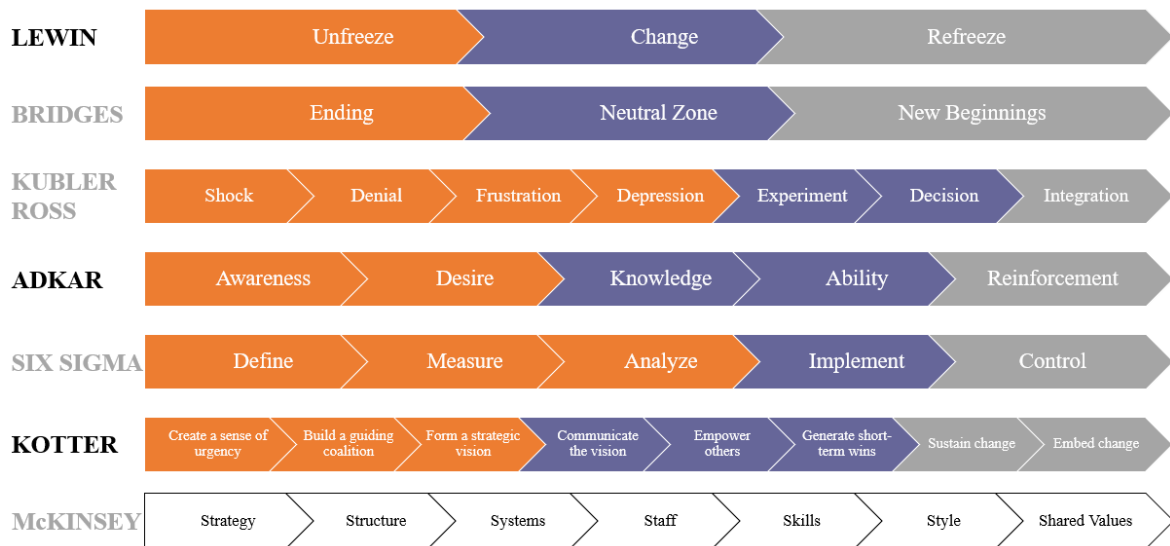
LEWIN	Unfreeze		Change		Refreeze	
BRIDGES	Ending		Neutral Zone		New Beginnings	
KUBLER ROSS	Shock	Denial	Frustration	Depression	Experiment	Decision	Integration
ADKAR	Awareness	Desire	Knowledge	Ability	Reinforcement	
SIX SIGMA	Define	Measure	Analyze	Implement	Control	
KOTTER	Create a sense of urgency	Build a guiding coalition	Form a strategic vision	Communicate the vision	Empower others	Generate short-term wins	Sustain change	Embed change
McKINSEY	Strategy	Structure	Systems	Staff	Skills	Style	Shared Values

Figure 4: Comparison of change management models (own illustration)

The decision to select just these models is reflecting on their impact on pandemic adjustments' organizations had to accomplish, but also because they differ on below facts from other methods (Beer & Nohria, 2000):

- Emphasis on the human factor: These models focus on the people involved in the change process and their emotional reactions to change. They recognize that change can be difficult and stressful and aim to address people's concerns and fears in a supportive and empathetic manner.

- Systematic approach: These models provide a structured and systematic approach to change management, with clear steps and processes to follow. This helps to ensure that all aspects of the change are considered and addressed, and that the change is implemented in a logical and efficient manner.

- Change as a process: These models view change as a process, rather than a one-time event. They recognize that change takes time, and that it is important to manage the different stages of the change process in a deliberate and thoughtful manner.

- Leadership: These models place a strong emphasis on the role of leadership in driving and managing change. They recognize that effective leadership is essential to gaining buy-in and support for the change, and to ensuring that the change is implemented successfully.

Overall, Lewin's, Kotter's, and ADKAR models are different from other change management methods because they provide a comprehensive and holistic approach to change

management that considers the human factor, provides a structured and systematic approach, views change as a process, and emphasizes the importance of leadership.

2.5 Change thinking – Kurt Lewin

Numerous academics and writers of change management books regard Kurt Lewin's research on social change utmost significant, if not even initial to the development of overall organizational change studies (Burnes, 2004a) and/or is regarded by many as the creator of the classic and fundamental approach to managing change (Cummings et al., 2016; Robbins et al., 2017; Sonenshein, 2010; Waddell et al., 2019).

Edgar Schein (1988, p. 239) named Lewin, one of the pioneers of social, organizational, and applied psychology and is recognized as the "founder of social psychology" due to be one of the first to study group dynamics and organizational development, even "the intellectual father of contemporary theories".

Why Lewin is so indispensable in change management theory, is as important to understand as how his work was presented in later works by various researchers.

Based on Hendry's research (1996, p. 624) he highlights that various academics claim that all concepts of change are "reducible to this one idea of Kurt Lewin's" and many change consultants consider Lewin's simple three-step change model (figure 6) as their most powerful asset or admire and praise Lewin for providing the foundation on which change management was built and developed, One of these scientists is Edgar Schein (2010, p. 299) "The fundamental assumptions underlying any change in a human system are derived originally from Kurt Lewin (1947)". Furthermore, many change management schoolbooks highlight Lewin's model in their beginning chapters as the basis on where the topic of change management has developed.

To understand Kurt Levins impact on scientific literature, with the support of Google Books Ngram Viewer we can show trends of a contiguous sequence of n items (n-grams) from a given sample of text or speech. Figure 5 displays a graph showing how phrases have occurred in a corpus of books (e.g., "British English", "English Fiction", "German") over the selected years. The below n-gram includes some bigram examples such as "Kurt Lewin" or "John Kotter" and "ADKAR" a unigram. The y-axis displays of all the n-grams contained in a sample of books written in English between 1920 and 2019, and what percentage of them are bigrams like "Kurt Lewin" or "John Kotter" and of all the unigrams, what percentage of them are "ADKAR". Results are not noticeably different when the corpus is switched to American English.

We can see that use of the phrase "Kurt Lewin" in literature started to rise in the late 1920s and has never been overtaken by either of the other. It peaked in 2012 and has been declining since then, still leaving "John Kotter" and "ADKAR" behind. Incidentally, can also observe an increase of "change management" since the 1990ies.
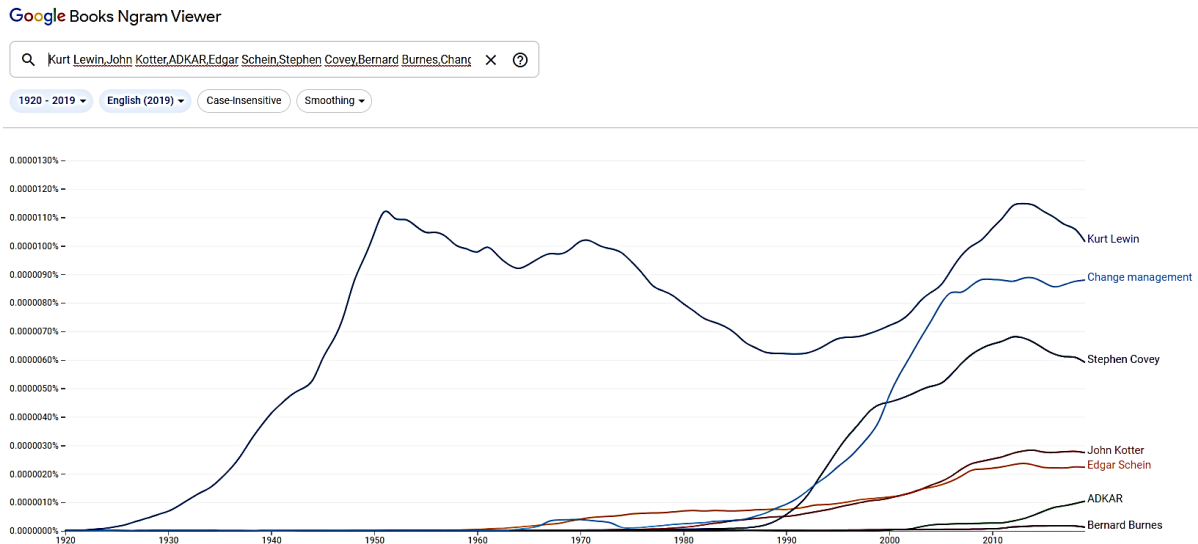

Figure 5: N-Gram view from Google (accessed 29/10/2022)

According to several researchers (Burnes, 2004a; Child, 2015; Kanter, 2003; Schein, 2010), Kurt Lewin proposed a process through three stages (figure 6) to accommodate repressing and empowering environmental forces demanding change.
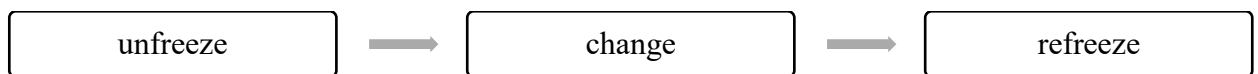

Figure 6: Change as three steps (Cummings et al., 2016, p. 34)

- Phase one is defined as "unfreezing" and involves changing the present situation or balance, a behavioural thaw (Bekmukhambetova, 2021; Galli, 2018). "This procedure must assess the characteristic dangers that change presents to individuals and the need to persuade those influenced to achieve the normal condition of harmony by tolerating change", (Pawar & Charak, 2017, p. 80). Unhelpful actions need to be accomplished unequivocal and disconfirmed whereas substantial change needs to be distinguished. "Human behaviour was based on a quasi-stationary

equilibrium supported by a complex field of forces. Before old behaviour can be discarded (unlearnt) and new behaviour successfully adopted, the equilibrium needs to be destabilized (unfrozen)", (Sarayreh et al., 2013, p. 627).

- The following stage is "change" (or transition) and through exploring activities through experimentation, change steadily becomes actualized (Talmaciu, 2014). This stage creates motivation to learn but not necessarily control or predict the direction (Schein, 1996). Sarayreh (2013, p. 627) claims that: "This Action Research-based learning approach enables groups and individuals to move to a more acceptable set of behaviours". After a suitable change is completed and executed, the next stage comes into action.

- The "refreezing" stage begins with the objective to implement new changes in a condition of balance to be discovered and acclimatized sufficiently to be available for later activities (Cummings et al., 2016; Talmaciu, 2014). Its aim is to stabilize the group into a new quasi-stationary equilibrium to ensure that new actions are relatively safe from failure (Sarayreh et al., 2013). This stage necessitates practices to be balanced with the entity and overall environment and according to Levasseur (2001) this stage requires change agents to work actively to implement and enhance the new system.

Underlining the importance of leadership before launching each step is documented by Burke (2017), Whelan-Berry (2003) and Durand (2006), but we will also find that Kotter's model is driven by leadership (see chapter 2.6.1).

We will find indications through the empirical analysis of hypothesis 2 if this leadership support approach materializes after being hit by a natural disaster like a pandemic in the survey responses or not.

Returning back to Lewin, Galli (2018, p. 126) states "Lewin made several assumptions for effective change. His first assumption was that there needs to be a change motivator or else the change does not occur. The second assumption was that employees are at the heart of changes within the organization. Then, his third assumption was that those affected by the change need to adapt, incorporate the new processes into their routine, and discontinue past practices. Lastly, Lewin postulates that even with desirable goals, resistance to change is common. For a change to be effective, replacing organizational behaviours and attitudes must reinforce it".

Many famous change management researchers continue to this day to share assumptions made by Lewin and either praise or disparaged this model – however without citing correct sources towards any potential publication written by Lewin. The more one investigates the history of Lewin's three-step model, the more inconsistencies between today's view and what Lewin wrote, when and surfaced. That there is a tremendous number of scientific publications available about Lewin without any references to his work. Here an example: "I have deliberately avoided giving specific references to Lewin's work because it is his basic philosophy and concepts that have influenced me, and these run through all of his work as well as the work of so many others who have founded the field of group dynamics and organization development.", Schein (1996, p. 27).

The majority of researches as investigated by Cummings, Bridgman and Brown (2016) write about Lewin and citing a book with "Lewin 1951", Field Theory in Social Science. However, they fail to acknowledge that this publication is not a book, nor an article published by him but an edited compilation of Lewin's papers (Shea, 1951). Furthermore, this book could never have been written by Lewin as he never wrote a book. His thoughts and ideas are only spread across a series of collected papers (Coghlan & Brannick, 2003).

End of October 2022, Google Scholar lists "Kurt Lewin 1951" with 31.500 results on citations (see annex 11.1), "his book" was published four years after his death in 1947.
The earliest Clark et al. (1947) consolidate some of Lewin's last writings in a model called the "Three-Step Procedure" acknowledging also that their work was published after Lewin's passing, this indicates that he may not have had a chance to revise nor provide input on that three-step procedure. Cummings et al. (2016) also claim that Lewin never wrote 'refreezing' in any of his papers, their research led to the conclusion that it was first mentioned by one of his former students Leon Festinger (1949).
Still the thought process towards this three steps model was not the only impact Kurt Lewin had on fellow researchers in the developing change management area. Lewin contributed additional three focus areas: group dynamics, action research and subsequent leading to his most famous topic: the forced field theory (Burnes, 2004a, 2004b). In short as already addressed in chapter 2.3, the forced field theory stresses resisting forces linked to any change, and driving forces, which initiate change, outweigh resisting forces to accomplish a successful change. Whereas restraining forces act to control or decrease driving forces. The overall goal is to reach a state of equilibrium for change to complete.

2.5.1 The development of a fundamental basis

Even though Lewin's lack of reconcilable scientific content on the three-step model: unfreeze → change → refreeze, one can still assume that he gave great thought to it. It is important to address this topic in this thesis as Lewin was a change management thought leader and an inspiration for many later great change management researchers such as Burke (1982), Burnes (2004a, 2004c, 2011), Cameron (2019), Covey (2013), Hayes (2022), Kotter (2019; 2021), Schein (1988, 1996) just to name a few, but many more.

As we can see in figure 7, Lewins interpretation of the three-phase model turned into a solid foundation and inspiration for further development of change management process models:

- Schein's Lewinian model (2010)
- 8 Steps for Leading Change by Kotter (1996) – 1st edition 1995.
- 3 Acts of Transformation by Tichy and Devanna (1986)
- The Planned Change Model developed by Kolb and Frohman (1970)
- Schein and Bennis 'Lewinian' Model of Attitude Change (1961; 1965)
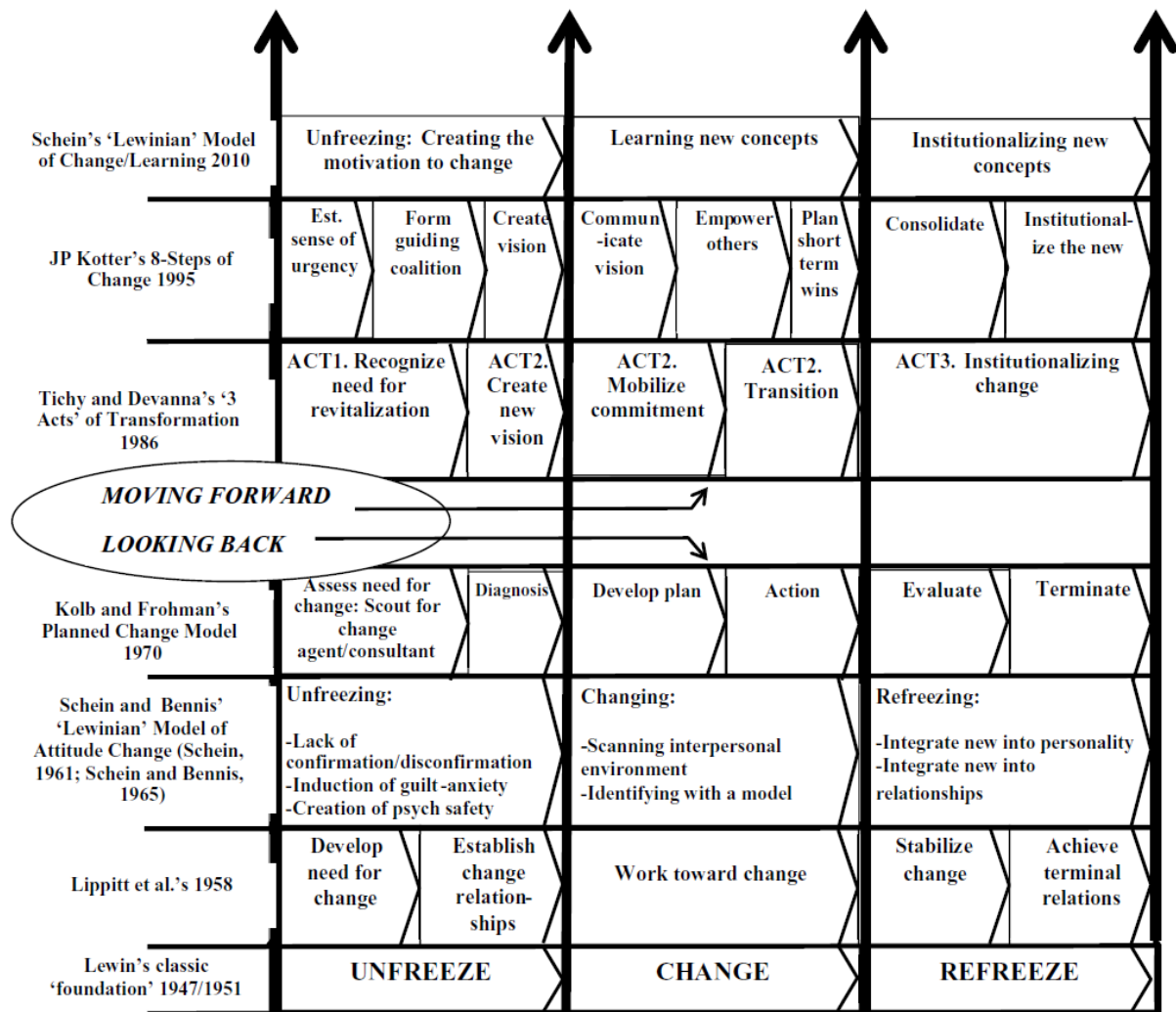- Lippitt's Seven Phase Model (1958)

	UNFREEZE	CHANGE	REFREEZE
Schein's 'Lewinian' Model of Change/Learning 2010	Unfreezing: Creating the motivation to change	Learning new concepts	Institutionalizing new concepts
JP Kotter's 8-Steps of Change 1995	Est. sense of urgency / Form guiding coalition / Create vision	Commun-icate vision / Empower others / Plan short term wins	Consolidate / Institutional-ize the new
Tichy and Devanna's '3 Acts' of Transformation 1986	ACT1. Recognize need for revitalization / ACT2. Create new vision	ACT2. Mobilize commitment / ACT2. Transition	ACT3. Institutionalizing change
MOVING FORWARD *LOOKING BACK*			
Kolb and Frohman's Planned Change Model 1970	Assess need for change: Scout for change agent/consultant / Diagnosis	Develop plan / Action	Evaluate / Terminate
Schein and Bennis' 'Lewinian' Model of Attitude Change (Schein, 1961; Schein and Bennis, 1965)	Unfreezing: -Lack of confirmation/disconfirmation -Induction of guilt-anxiety -Creation of psych safety	Changing: -Scanning interpersonal environment -Identifying with a model	Refreezing: -Integrate new into personality -Integrate new into relationships
Lippitt et al.'s 1958	Develop need for change / Establish change relation-ships	Work toward change	Stabilize change / Achieve terminal relations
Lewin's classic 'foundation' 1947/1951	UNFREEZE	CHANGE	REFREEZE

Figure 7: Lewin's classic foundation (Cummings et al., 2016, p. 42)

What becomes transparent in above the previous figure 6 (Cummings et al., 2016) is that each of the later models aligns to the foundational thinking based on Kurt Lewin's work. He may not have documented it like that, but other scientists developed it into various models claiming Lewinian heritage.

Until the late 1980ies Lewin's legacy was pretty much declining (figure 7). However, with growing interest in change management topics in the late 1980ies the attention towards his work increased again. In the 1980ies also a new phenomenon occurred: pop(ular) management literature (de Paula & Wood Jr, 2009) exemplary for the addition of more simple frameworks and 'step' diagrams which were great instruments for easier teaching to large groups of (change) management learners.

During the 2000s remains of four core approaches of managing organizational change were omnipresent: still Lewin's classic model, action research, organizational development and Kotter's 8 Steps for Leading Change plan (Robbins et al., 2010). By the end of the 20th

century due to increased global dynamics and uncertainty, anti-Lewinian researcher argue the obsoleteness of the three-steps model as it operates in a world of certainty and predictability, exemplary Kanter (2003, p. 10) who argues that "Lewin's model was a simple one, with organizational change involving three stages; unfreezing, changing and refreezing … This quaintly linear and static conception – the organization as an ice cube – is so wildly inappropriate that it is difficult to see why it has not only survived but prospered … Suffice it to say here, first, that organizations are never frozen, much less refrozen, but are fluid entities with many 'personalities. Second, to the extent that there are stages, they overlap and interpenetrate one another in important ways." and therefore being unsuitable in today's complex environments which demand flexibility and adaptation (Child, 2015).

The 21st century has been acknowledged as being one of exceptional change as businesses have never operated on such worldwide synergistic measurements nor speed nor pandemic influence. Lewin`s approach is rationale which demonstrates the sequence of change that organization encounter in any simplified situation nowadays. Change management approaches used today were probably developed in a less complex time and seem to not by and large up to the assignment, especially when we consider a pandemic impact as we had with COVID-19 in 2020. Still, Lewin considered change as an modification of existing strengths keeping the overall framework stable (Pawar & Charak, 2017). His ideas continued to develop on their own due to scholarship help and maintain to carry an unbelievable recognition of it as the fundamental basis of thinking across change management topics.

2.6 Delivering lasting business transformation – John P. Kotter

There are tons of business management literature available on and from John P. Kotter and his approach towards change.

In this thesis especially as part of hypothesis 1 "The 8 Steps for Leading Change" will be in focus, to understand if and how it impacted and forced organizational changes due to COVID-19 from office life to a so called nowhere office life (a remote place not part of the traditional office space). One of its benefits is the structured approach that helps organizations to deal with challenges of change and the impact of management versus other approaches.

Commitment to change involves flexibility, but Kotter (1996) finds unanticipated actions during the change process challenging. This is one reason Kotter expanded Lewin's theory (Galli, 2018) and in the book "The heart of change: real-life stories of how people change

their organizations" Kotter and Cohen (2012) providing more practical guidance on how to drive change efforts and have consolidated examples of overcoming challenges utilizing a linear eight-steps change approach (figure 8). Note - in his later book "Accelerate: Building Strategic Agility for a Faster-Moving World" (Kotter, 2014) he changes the naming from "steps" to "accelerators" around a big opportunity.

Kotter and his co-author Cohen shared an important message, particularly that individuals get an opportunity to do something else, when demonstrated facts that impact their thinking of change, and a sense of urgency is created.

2.6.1 Management vs leadership

The more we advance into the 21st century the focus of specific change agents turns towards an effective manager, who requires responding to the complexity of an environment and potential resistance of the workforce. Kotter is a strong advocate of having leadership support and impact by driving and sustaining changes required for an organization to compete in the current competitive dynamic world. However it is important to highlight that he differentiates between management as a processes that keeps complex system, tools and people running and leadership as a set of processes that build organizations or adapts them to changing conditions (Kotter, 1996, p. 25).

Evaluating figure 8, it demonstrates "that successful change is 70 to 90 percent leadership and only 10 to 30 percent management" (Kotter, 1996, p. 26).

Unfortunately, most organizations do not have much leadership, because of thinking to *manage* change. This wrong approach already roots in educations systems offering business management courses where people are little taught about leadership but a lot about management.

There is no doubt that managing change is critical, as without it the whole transformation process can get out of control. Regrettably, for most organizations nowadays the greater task is leading change as they have become overmanaged and underled.
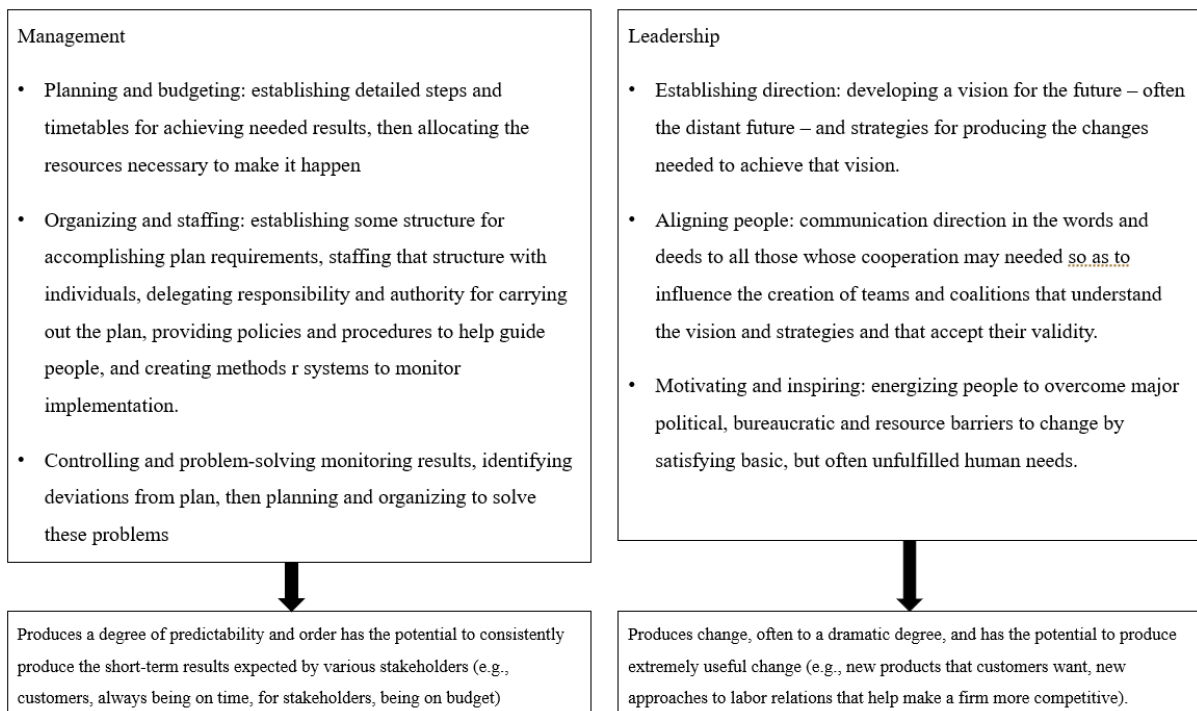
Management	Leadership
• Planning and budgeting: establishing detailed steps and timetables for achieving needed results, then allocating the resources necessary to make it happen • Organizing and staffing: establishing some structure for accomplishing plan requirements, staffing that structure with individuals, delegating responsibility and authority for carrying out the plan, providing policies and procedures to help guide people, and creating methods r systems to monitor implementation. • Controlling and problem-solving monitoring results, identifying deviations from plan, then planning and organizing to solve these problems	• Establishing direction: developing a vision for the future – often the distant future – and strategies for producing the changes needed to achieve that vision. • Aligning people: communication direction in the words and deeds to all those whose cooperation may needed so as to influence the creation of teams and coalitions that understand the vision and strategies and that accept their validity. • Motivating and inspiring: energizing people to overcome major political, bureaucratic and resource barriers to change by satisfying basic, but often unfulfilled human needs.
Produces a degree of predictability and order has the potential to consistently produce the short-term results expected by various stakeholders (e.g., customers, always being on time, for stakeholders, being on budget)	Produces change, often to a dramatic degree, and has the potential to produce extremely useful change (e.g., new products that customers want, new approaches to labor relations that help make a firm more competitive).

Figure 8: Management versus leadership (Kotter, 1990, p. 6)

2.6.2 The 8 Steps for Leading Change

We are in a world of change, that is a fact, and are facing it either voluntarily or involuntarily. Organizational change or also called transformation is often met with resistance and implementing changes can be an intimidating prospect. But adaptation is a need for sustainable business and when change at any level takes place leadership can make the difference between companies that thrive and companies that fade. When it comes to change management today, there is not really a way around the 8 Steps for Leading Change by John P. Kotter (figure 9).

The 8 steps of Kotter's model are:

1. Increase urgency
2. Form a powerful coalition
3. Create a vision for change
4. Communicate the change vision
5. Empower others to act on the vision
6. Create short-term wins
7. Consolidate gains and produce more change
8. Anchor new approaches in the organization's culture

The main activities already happen in the beginning, by creating a climate of change through driving a sense of urgency and establishing with everyone an understanding why change is needed. "This gives the incentive it needs to implement the change, and enough people are working to implement it, and this should quickly become standard practice", (Bekmukhambetova, 2021, p. 105).

Figure 9: Kotter's Eight-step Process for Leading Change (McAllister, 2019)

Step one: the team or an organization recognizes the need for change and creates a sense of urgency around a big opportunity among as many people as possible (Kotter, 2019). In the Harvard Business Review article Kotter (2014) stated that it is crucial to increase an organization's awareness on strategic adjustments, but also with opportunities and incentives in sight. Creating a sense of urgency is critical not only in regards of increasing awareness of a change, but also awareness driving strategic adjustments with various opportunities ahead, therefore in gaining needed cooperation. "Without a sense of urgency people won't give that extra effort that is often essential", (Kotter, 1996, p. 5). In this stage he raises awareness that organizations need to consider in order not to fail their change efforts at an early stage. "A little is about knowing when to drive the change by ensuring the change has a reasonable run and won't get side-lined because of another action that is now in play", (Dijesh & Mary, 2017, p. 1355).

Step two: Kotter (1996) highlights the importance of an effective leadership team to build urgency around the need for change, like "…pioneers of the general population who are

required to change", (Dijesh & Mary, 2017, p. 1355) and they also need form a powerful guiding coalition to leverage the message why change is needed.

Step 3: Creating a vision is all about articulating a clear and rational vision for the transformation or change (Galli, 2018). At this stage it is necessary to align process to goals (Calegari et al., 2015) and as any change cannot be effective without a well-developed strategic vision to help shape the path not only for people involved but to manifest the need of support broadly. The need is to tie everything from operations to moral towards this vision and in the process of doing to confront any resistance proactively.

Then communicating the strategic vision – step four. Sharing the vision to get people on board is one side, but their buy-in is as important. To see the need for change and raise awareness, if communication is not handled carefully resistance from employees can arise (Galli, 2018; Kotter, 1996).

Step five: Empowering others to act on the vision through seeking and trying new ideas and methods. Leaders reinforcing the value of change by continuous communication to help employees overcoming their fears (Kotter, 1996; Kotter et al., 2006). Furthermore, recognizing and rewarding early supporters while implementing changes is a reassuring task as well for the overall workforce.

Step six highlights the importance of planning, sharing, and celebrating short-term wins. Change is implemented not just by a catalyst, but through a steady current. Construction momentum for the vision is essential to ensure it sticks. Short-term victories are motivators for those who are working on the new vision and are a good way to prevent any naysayers or critics of the new vision.

Step seven: focuses on securing improvements and generating more change through not letting complacency into the process and focusing on continuous progress. This is to avoid falling back into old habits (Kotter, 1996). An organization needs to analyse progress so far and set progressively more ambitious objectives that can build exponential momentum upon the final achievement.

The final step in the change process is to institutionalize and incorporating change and anchor it within the organizational culture (Kanter, 2003), but merging change into culture incorporates assurances that the administration structures have the change implanted (Dijesh & Mary, 2017). If the organization has a traditional managerial hierarchy such efforts of inclusion are crucial (Galli, 2018), just as time, changes in leadership or staff can evaporate the impact of previous efforts quickly and easily.

2.6.3   Challenges with the Eight-Steps Model of Change

One of the biggest mistakes organizations make is to jump ahead in a change process and neglect the fact to create a sense of urgency. If complacency levels are high, then transformation projects will fail (Kotter, 1996).

Driving people out of their comfort zones is also an underestimated fact when organizations overestimate how much force they can apply on changes. As a result, they become paralyzed by the downside possibilities associated with reducing complacency. According to Pawar and Charak (2017) another main challenge in driving a transformation is changing people's behaviour. They raise the importance of the so-called core issue being behaviour – which is what requires to be changed significantly reactive.

Dijesh and Mary (2017, p. 1357) mention as a setback with the model in general as "Kotter's model concentrates on the "10,000-foot view" and argue that Kotter's model is prescribed for experienced change initiator or implementer".

Last Galli (2018) raises following two issues:

1. The 8 Steps model appears to be top-down driven because there is no opportunity for employees to get integrated into sharing ideas nor strategic vision creation.
2. Another disadvantage (coming back to complacency) is if a step is skipped or executed incorrectly agreeing here with Kotter. It will impact any other step and can leave an organization and change management team to delay or regress, resulting in wasted time and effort.

Another concern is that Kotter's theory is great as a checklist but lacks the necessary actionable instructions to be taken as a step-by-step process (Bekmukhambetova, 2021, p. 109).

2.7   The ADKAR model

During his time as a project lead at Bell Laboratories Jeffrey M. Hiatt (2006) discovered a common pattern across project failure – it was resistance to change. He began to develop the

ADKAR model mainly because the variety of change management approaches recommended by management consultants did not deliver expected results and frustration was high.

Describing the model he states, "the ADKAR model provides a primary framework to bring together new and traditional methods for managing change and is instrumental in diagnosing failing changes" Hiatt (2006, p. 1, Preface) and it is "a framework for understanding and applying many approaches for managing change. ADKAR is a perspective on change that enables other change management tactics to have focus and direction" (2006, p. 3, Preface).

ADKAR is also an acronym for five elements/objectives (table 8): awareness, desire, knowledge, ability, and reinforcement. All of them must be in place for change to start and must be followed in sequence (Hiatt, 2006; Hiatt & Creasey, 2003) to succeed.

ADKAR is a sequential and cumulative goal-oriented change management model framework for targeting change first at the people adaptation, it begins and ends with employees at the center of change. Hiatt (2006, p. 1) describes it further as "a framework for understanding change at an individual level" and is extended in order "to show how businesses, government agencies and communities can increase the likelihood that their changes are implemented successfully".

It is also quoted as an evidence based change management model (Wong et al., 2019) as it helps to create a clear language for employees across all levels and roles which also allows it to scale across complex organizational structures. Once an understanding of the need to change is established the overall operational approach also changes.

Table 8: ADKAR elements and change success factors

	ADKAR elements	Factors influencing success
A	Awareness of the need for change	- a person's view of the current state - how a person perceives problems - credibility of the sender of awareness messages - circulation of misinformation or rumours - contestability of the reasons for change
D	Desire to support and participate in the change	- the nature of the change (what the change is and how it will impact each person) - the organizational or environmental context for the change (his or her perception of the organization or environment that is subject to change) - everyone's personal situation - what motivates a person (those intrinsic motivators that are unique to an individual)
K	Knowledge of how to change	- the current knowledge base of an individual - the capability of this person to gain additional knowledge - resources available for education and training - access to or existence of the required knowledge
A	Ability to implement required skills and behaviours	- psychological blocks - physical abilities - intellectual capability - the time available to develop the needed skills - the availability of resources to support the development of new abilities
R	Reinforcement to sustain the change	- the degree to which the reinforcement is meaningful and specific to the person impacted by the change - the association of the reinforcement with actual demonstrated progress or accomplishment - the absence of negative consequences - an accountability system that creates an ongoing mechanism to reinforce the change

Source: Hiatt, 2006, p. 45

2.7.1 The ADKAR elements

Awareness

"Represents a person's understanding of the nature of the change, why the change is being made and the risk of not changing. Awareness also includes information about the internal and external drivers that created the need for change, as well as "what's in it for me.", (Hiatt, 2006, p. 2). This element is only achieved when an individual is aware of and comprehends the nature of the change, why it is needed and the risks of not action. This happens when a change management teams inform employees of a need for change and establishing the level of understanding required for a specific situation and consciousness of the business objectives behind the proposed change become aware (Dijesh & Mary, 2017). Even if not all answers are available at the exact moment it is important to communicate in an open, direct and honest way to build alliances (Balluck et al., 2020).

Hiatt (2006) describes that some managers claim, that their directs do not need to know the motives behind every change. Such managers share the opinion that employees are paid for their work, and should that job change, they just do the new tasks and should not ask why a change was needed. However, times are changing and in our information age the demands for transparency and clarity are evident and not sharing can create resistance and barriers to change within an organization.

Desire

"Represents the willingness to support and engage in a change. Desire is ultimately about personal choice, influenced by the nature of the change, by an individual's personal situation, as well as intrinsic motivators that are unique to each person", (Hiatt, 2006, p. 2). It is also the motivation and the effort of taking an interest in the change, of employees to participate in the change motion along with the capability to perform required changes. Balluck (2020) highlights organizational change needs also as an individual change process. However, it is realistic to state that a potential of resistance will always be around. This resistance, however, can be minimized through continuous efforts to drive understanding of the need for change of the individual or team.

Knowledge

"Knowledge represents the information, training, and education necessary to know how to change. Knowledge includes information about behaviours, processes, tools, systems, skills, job roles and techniques that are needed to implement a change", (Hiatt, 2006, p. 2).

It is required for employees on how and what to change, Dijesh and Mary (2017, p. 1354) also highlight that "Collaborate and instil the different dimensional information and appreciate the change".

Sharing information in various forms is essential, plus including continuously the what and why explanation is crucial (Balluck et al., 2020). Knowledge addresses in the ADKAR model the "how to" turn change into action. "When a person has the awareness of the need for change and the desire to participate and support a change, knowledge is the next building block for realizing that change" Hiatt (2006, p. 23). This includes:

- Upskilling people through education on skills/behaviours to perform the change.

- Comprehensive data and information on how to use processes, systems, and tools.

- Understanding of the new rules and responsibilities connected with the change.

There are also several pieces (Hiatt, 2006) influencing knowledge generation, which require to be respected, such as knowledge an individual already has versus what is required (gap), then individual capability to learn and what resources are available to support the learning curve and if it is accessible (figure 10).
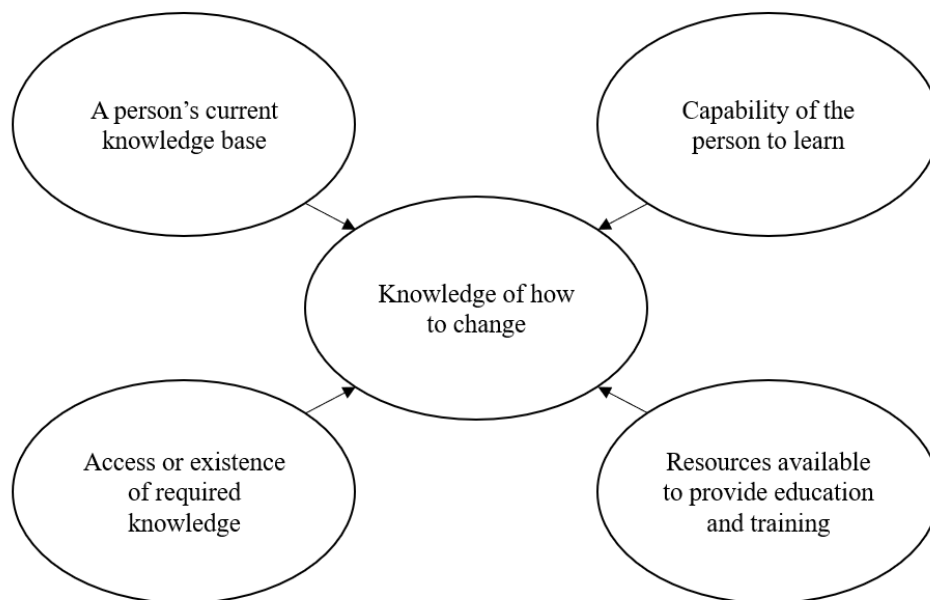
Figure 10: Factors influencing knowledge on how to change (Hiatt, 2006, p. 27)

Ability

"Represents the realization or execution of the change. Ability is turning knowledge into action. Ability is achieved when a person or group has the demonstrated capability to implement the change at the required performance levels", (Hiatt, 2006, p. 2). It is the skills

and capabilities to execute change at required levels (Dijesh & Mary, 2017) and required to implement change on a day-to-day basis.

Passing the knowledge element is often insufficient, as depending on roles, responsibilities and systems may not immediately demonstrate proficiency in the areas of change. "Awareness, desire and knowledge are all essential building blocks, but fall short of realizing change if ability is absent", (Hiatt, 2006, p. 31). Therefore, we also need to include several factors (figure 11) impacting the ability to implement change overall and contribute to the individual's potential to develop new abilities.
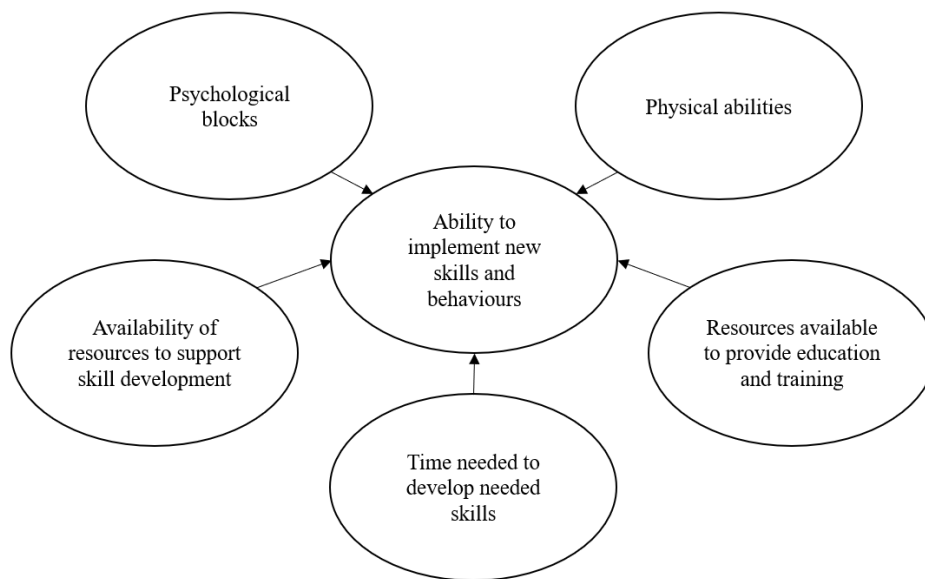
Figure 11: Factors influencing ability to implement a change (Hiatt, 2006, p. 32)

Naturally the process of acquiring new skills or competencies is supported by the right infrastructure of support for the individual. Such an infrastructure cultivates news skills, but also looks at the surface of knowledge gaps through the change process. The element of *Ability* is achieved when the individual or organization implements change successfully and achieves the desired outcome associated with that change.

Reinforcement

"Represents those internal and external factors that sustain a change. External reinforcements could include recognition, rewards and celebrations that are tied to the realization of the change. Internal reinforcements could be a person's internal satisfaction with his or her achievement or other benefits derived from the change on a personal level", (Hiatt, 2006, p. 2). Meaning to maintain and sustain change in the organization is certainly a motivational

key factor (Dijesh & Mary, 2017) against any obstacles on the path of proposed change. Reinforcement does not always need major events, but identifying the how and who is necessary to (Balluck et al., 2020) to avoid falling back into old habits, therefore it is important to consider the certain factors (figure 12) that impact reinforcement.
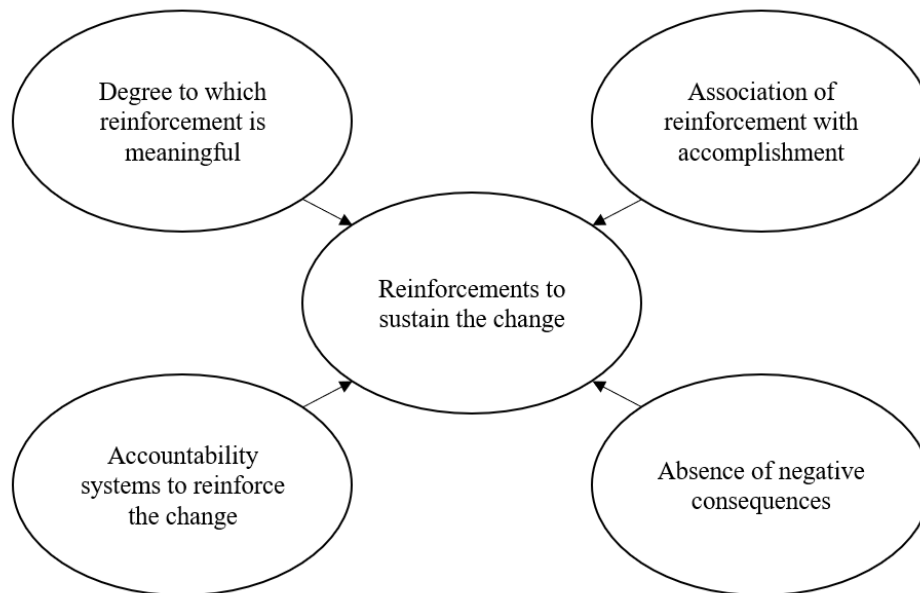
Figure 12: Factors that influence reinforcement to change (Hiatt, 2006, p. 38)
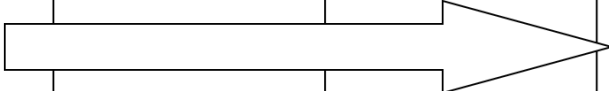
Without continuous considerations of reinforcements, old habits and norms find their way back into the organizational environment. When this happens, an organization develops a negative history to change and when a new change initiative is started individuals recall previous experiences on how change was managed, and how they were treated during it. Hiat (2006, p. 41) mentions three purposes of reinforcement: "First, reinforcement sustains the change and prevents individuals from slipping back into old behaviours or old ways of doing work. Second, reinforcement builds momentum during the transition. Finally, reinforcement creates a history that individuals remember when the next change occurs. If change is reinforced and celebrated, then the readiness and capacity for change increases".

2.7.2 Benefits of ADKAR

Each ADKAR element falls into a natural order how we experience change, desire cannot take place before awareness, because without awareness how would one know (Hiatt, 2006). However, the ADKAR model can also be mapped against business results (table 9) such as cost, revenue, quality assurance and return on investment. In business terms and objectives of such a change plan expectation of the project to be on time and on budget are legitimate.

Table 9: Aligning change management with business results

Change management strategy development	Change management activities	Change management elements -ADKAR	Business results
Assess the change	Communications	Awareness	On time
Assess the organization	Sponsorship	Desire	On budget
Assess sponsorship	Training	Knowledge	Achieve Business Objectives
Assess risks and challenges	Coaching	Ability	- lower cost
Design special tactics	Resistance Management	Reinforcement	- increased revenue
Form team and sponsor model			- improved quality
Assess team Readiness			- return on investment
			- (ROI)

Source: Hiatt, 2006, p. 48

Table 9 above clarifies how business results are only achieved once all ADKAR elements have been achieved and employees can perform within their new environment and capabilities and then implement change at the necessary performance level.

Based on experiences through implementing a new project in healthcare during the first COVID-19 outbreak Balluck et al. (2020, pp. 543-545) describe leveraging the ADKAR change management approach (table 10). They address five principles of change management driven through consistent messaging and united methodology across the workforce towards the vision of change from the top down:

1. To change for a reason.
2. Organizational change requires individual change.
3. Organizational outcomes are the collective result of individual change.
4. Change management is an enabling framework for dealing with the people's side of change.
5. We apply change management to realize the benefits and desired outcomes of change.

These principles highlight ADKAR's focus on the totality of the workforce being involved from the beginning and not being a top-down or management effort only.

Table 10: ADKAR Change Management

	Questions to Ask Yourself	Action Steps to Take	Without ADKAR You Will See...	With ADKAR You Will Hear...
A Awareness	What is the nature of the change? Why is the change needed? What is the risk of not changing?	Draft effective and targeted communications Share the why and the vision Provide ready access information	More resistance from employees Lower productivity	I understand why...
D Desire	What's in it for me (WIIFM)? How is this a personal choice Will I decide to engage and participate?	Demonstrate your commitment Advocate for change Engage influencers to foster employee participation and involvement	Higher turnover Delays in implementation	I have decided to...
K Knowledge	Do I understand how to change? Where can I be trained on new processes & tools? How do I best learn new skills?	Provide effective training with the proper context Facilitate education for, during, and after the change Create job aides and real-life applications	Lower utilization or incorrect usage of new processes and tools Greater impact on customers and partners	I know how to...
A Ability	Am I demonstrating the capability to implement the change? Am I able to achieve the desired change in performance or behavior?	Facilitate coaching by managers, supervisors, and subject matter experts Offer hands-on exercises, practice and time Eliminate any potential barriers	Sustained reduction in productivity	I am able to...
R Reinforcement	What actions can I take to increase the likelihood that this change will continue?	Celebrate successes individually and as a group Reward and recognize early adopters Give feedback on performance and accountability	Employees will revert to old ways of doing work The organization creates a history of poorly managed change	I will continue to...

Source: Balluck et al., 2020, p. 544

In the end successful change is achieved through ADKAR, when two objectives are accomplished (figure 13):

1. First, the business must recognize the complete implementation of the desired change and business objectives are met (vertical axis).

2. Second, an organization requires to walk through each element of the ADKAR model in order that individuals in the organizations can implement change and necessary reinforcements exist to sustain the change.
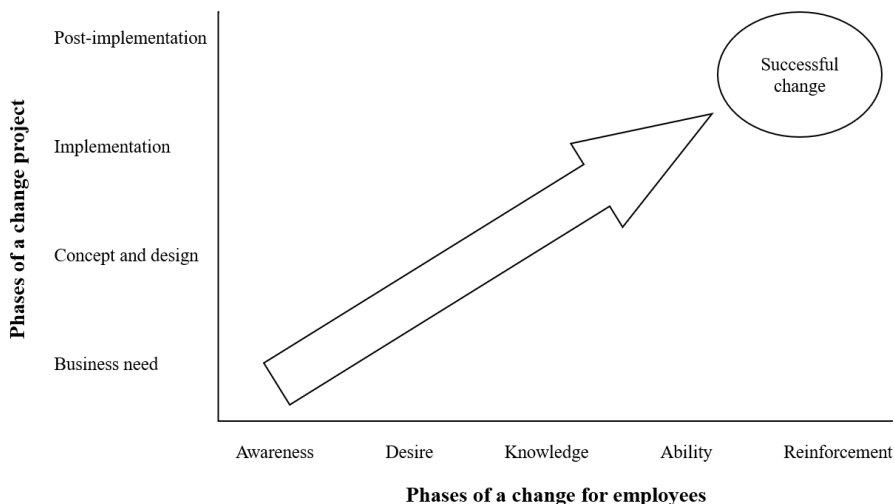
Figure 13: Success factors for change using ADKAR (Hiatt, 2006, p. 59)

achieving both a sense of urgency and a shared understanding of the need for change is crucial for the success of any change effort. Failure to establish these elements can lead to partially successful or failed changes, as Hiatt (2006) notes. Kotter's 8-step model also emphasizes the importance of these elements, but with a different approach, the catalyst of the messaging differs. The 8-step model provides a structured approach for leaders to create a sense of urgency, form a coalition, and communicate the vision for change in a way that aligns the organization and builds support for the change effort. This ultimately helps leaders to overcome resistance, achieve short-term wins, and anchor the new approach in the organization's culture, leading to successful change.

2.7.3   Disadvantages of using ADKAR

1) Galli (2018) states that since it focuses predominantly on the people side of the change, it is better suited for smaller environments, as opposed to largescale organizations which may have more complex processes to also address. It disregards the complexity of change with the need to have a vision and build a long-term plan to reach that vision with plan corrections along the route.

2) The ADKAR model is a practical ready to use approach and can be utilized instantaneously, however it misses to provide micro-level details, meaning there is no guidance to deep dive into the knowledge about change.

3) Some organizations may have a different culture and therefore ADKAR be a cultural mismatch (mentality driven, diversity blockages, misinterpretations, etc.).

The reason why the ADKAR model was included in this research (in hypothesis 1 and 2) is the increased focus on people's engagement in change adoption (Galli, 2018) and by how individuals experience the change - and not change itself. It provides leaders tools and approaches to better communicate, explain, and upskill employees while implementing change (Balluck et al., 2020) as ongoing collaboration with the support of communication must take place at all levels.

2.8   Comparative analysis across Lewin, Kotter, and ADKAR

Each model incorporates different strides for execution of the effective usage. No matter the model, change will only be successful if communicated and accepted by the entire workforce. Another critical aspect is also appropriate support, knowledge, and resources to be available already prior to the change process begins. Each models does have a diverse

segment that underlines the authoritative change (Dijesh & Mary, 2017). Some models focused more on the change process others on the people dimension.

The model based on Lewin is a straightforward three-step process, this simplicity makes it appealing for large organizations (Galli, 2018) as progressing change analysing is changes easy to accomplish and the three steps are transparent enough for people involved. A disadvantage of the three steps is that it neglects to explain how to handle the human part of change, (a common limitation of most methods). The fact is that resistance to change impacts any change model, if not handled correctly therefore guidance on that aspect is required. Further issue of the unfreezing phase if not scheduled properly, as it can develop in a time-consuming and costly phase or with minimal top management support (Galli, 2018).

Kotter versus Lewin differentiate by the quantity of steps, providing more details about the change process. Although both have a process focus, Kotter includes a people aspect of change, including important recommendations to involve people and communication to them. This is important in organizations with a strong hierarchical setup to ensure transparency of roles and responsibilities. Kotter's model appears very top-down, he strongly emphasizes the importance of leadership (not manager) vision and directive, employees do not have input or choice to share opinions before the strategic vision is created. Last, another disadvantage is that the model works strictly linear, and no step can be left out or skipped, which can also result in an expensive process regarding waste of time and effort.

ADKAR's advantage against the others is the intensified focus of employee's acceptance of change, as the process starts and ends by involving them. Therefore, it may be better suited to smaller environments, as opposed to large-scale organizations with complex processes. The starting point is also different between Kotter's model and ADKAR as second starts after a change has taken place.

Dijesh and Mary (2017) developed a mapping across these three approaches to better visualize each stage: first ADKAR to Lewin's model then Kotter to Lewin (table 11):

1. Unfreezing → Awareness, Desire, Knowledge
2. Change → Ability
3. Refreezing → Reinforcement

Table 11: mapping of Kotter's to LEWIN's model

STEPS IN LEWIN'S MODEL	MAPPED STEP # IN KOTTER"S MODEL
UNFREEZE	STEPS : 1 to 4
CHANGE	STEPS : 5 to 7
REFREEZE	STEP : 8

Source: Dijesh & Mary, 2017, p. 1356

Kotter's model seems to have an emphasis on "unfreezing", however both Lewin and Kotter focus on resistance diminishment and encouraging of individuals on the proposed change. Additional differences of the mentioned three models, listed by Dijesh and Mary (2017):

- Lewin's approach looks at the general population's point of view, real emphasis is on breaking resistance.
- Kotter concentrates on manager's administration getting change done instead of individual viewpoints like with ADKAR.
- ADKAR is all about the individual point of view, whereas Kotter goes inside and out of plausible outcomes of challenges and critical thinking strategies (Kotter, 1996).
- The substantial contrast between ADKAR and Kotter lies in the general population's end. ADKAR focuses on the individual, Kotter on senior administration.
- ADKAR is "dealing with a change" though Kotter is on the "leading the change" (Dijesh & Mary, 2017, p. 1356).

2.9 Work from Anywhere

"… work is something that is emotionally, intellectually, and economically sustaining. It is more than that, it is self-expressive, a critical identity marker, a source of self-worth, and a place in which interesting and challenging dilemmas get posed and more often than not, addressed in creative and original ways", (Orbach, 2008, p. 14).

2.9.1 Remote work before the pandemic of 2020

Working from home or any other place except an office refers to work accomplished at a remote location (Allen et al., 2015), and is not a new idea. The first transition to work away from an office already started in the early 1970s with the adoption of work-from home policies because of rising gasoline prices due to the OPEC oil embargo, which made commuting more expensive (Mitchell, 2010). Workers were given self-control of their schedules and were expected to come to the office only from time to time. In the early 2000s internet access, broadband connectivity, cloud computing, etc. supported and increased the adoption of the work from home model more than ever with even increasing productivity. Choudhury (2020, p. 4) reflects "that people should probably determine for themselves the situation (home or office) that fits them best".

Why working from home (hypothesis 3) - several scholars explain that working from home increases and supports a better quality of life (Chattopadhyay, 2021; Choudhury, 2020; Felstead & Henseke, 2017; Gajendran & Harrison, 2007; Kelliher & Anderson, 2008) for following reasons:

- It supports employees dealing with immigration issues and other restrictions on their ability to secure good jobs, they can still work from their location until country specific requirements are met to relocate.
- It can boost job satisfaction, due to reduced travel time and persona expenses.
- Working from home reduces turnover and absenteeism due to sickness.
- From a diversity point of view, women whose careers were previously limited by family duties or religious restrictions to travel can pursue their careers working from home.

Additionally, there are also monetary benefits for organizations such as a smaller number of in-office employees then asks for less office space requirements and resulting in reduced real estate and energy costs (Choudhury, 2020), enabling companies to further invest in hybrid work scenarios for their employees or as in present economic times be able to hold their talent and not reduce their workforce.

Work from anywhere drives a global identity and expands the range of inclusiveness, allowing multiple individuals to see beyond their national differences and work together remotely as a team, but not in an office. Jackowska and Lauring (2021) state that the present workplace includes workers of different origins and with such potential cultural background can indubitably become an important role when it comes to attitudes towards colleagues and that such various cultural elements, substantially affect individual overall perceptions and cognition.

2.9.2 Pandemic impact and response

The only constant in life is change as "for everything flows" or πάντα ῥεῖ (panta rhei), based on a saying from the Greek philosopher Heraclitus circa 535–475 BC.
First reports of SARS-CoV-2 in December 2019 were of a new respiratory virus with only local impact, however the "ease of transmission, combined with a buoyant global economy and unparalleled mobility of the population escalated the virus to a significant threat" (Phillips, 2020, p. 130). Almost 2 ½ years later November 2022, the WHO listed 6.5 million deaths and approximately 626 billion confirmed cases of COVID-19 (note: one person can have more than one infection) and highlights its significance.

The unexpected rise of the pandemic resulted in multiple economic aftereffects, such as causing significant increase in people unemployment, large-scale changes to organizational operations, and substantial adjustments to work and management styles (Li et al., 2021). However, these aftereffects did not stop with the discovery of vaccinations, they pursue driving high inflation and reduction in workforce across industries.
As the crisis is still of concern, leaders require to continuously accelerate implementing change initiatives to respond to public safety and social needs, but also safety measures of employees in their workplaces, while also selling products and services to survive the time. The world collectively faced a global challenge as never seen before and can be defined as a "transdisciplinary societal challenge that requires coordinated systemic thinking and actions in the context of uncertainty" (Lawrence, 2020, p. 583).

From a response perspective, in such a situation, multilevel governance is a fundamental requirement to be in place to address such a pandemic. A coordinated alignment of interdisciplinary professional information, knowledge and understandings was maybe highly required, but many European countries reacted by following the spread of this virus rather

than taking a proactive approach to prevention as warnings made by experts (Antia et al., 2003; Ferguson et al., 2001; Galvani, 2004) and this certainly did impact lives. Progress was mainly illustrated by the incapacity of governments to listen and learn from scientific knowledge in the perspective of uncertainty and vulnerability (Lawrence, 2020).

There were several types of resources available for coordinated action Lawrence (2020) argued to address a systemic reactive response plan mobilizing administrative, behavioural, financial, health care, legal and medical resources. These necessary actions at numerous geo-political levels, unfortunately did land in an uncoordinated approach. Although, some guidance was endorsed by the WHO such as isolation, quarantine, social distancing, testing or simply washing hands, whereas others were not (e.g., wearing masks in public spaces). Only such coordinated combinations of interdisciplinary and professional information and knowledge sharing (figure 14), as well as individual and social perceptions and understandings were necessary to consolidate understandings to be applied into a plan to allocate necessary resources and actions for effective responses (Lawrence, 2020; Tandon, 2020; Zarocostas, 2020).
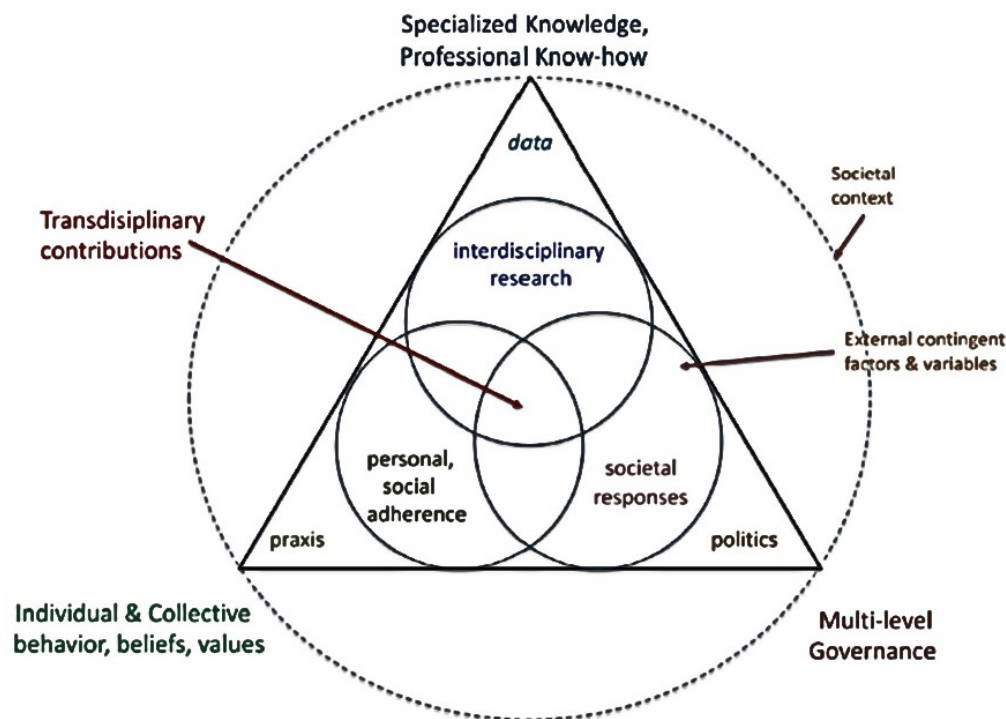
Figure 14: Responses to uncertainty of COVID-19 (Lawrence, 2020, p. 584)

Only when a broad understanding of implications or effects are evident, they can be applied to support and define another requirement to respond to such a pandemic: the appropriate allocation of many types of resources (e.g., administrative, financial, human, material, medical, pharmaceutical and scientific) are necessary to implement effective responses (Lawrence, 2020). This also shows a critical necessity: access to as many types of resources when and where required.

Various researchers list another important requirement to endure such a situation: the adherence to updated and new behavioural norms and regulations introduced by national and local governments (Lawrence, 2020; Pisano et al., 2020). These regulations certainly represented compromises and trade-offs between personal responsibility and freedom (influence of hypothesis 3), when an important collective choice is made on how to respond to threads to health, social and economic existence in context of uncertainty and vulnerability (Maital & Barzani, 2020).

By responding to the pandemic outbreak and the resilience of many countries and cities to counteract global threats another phenomenon was observed, just because they "lost their capacity to act autonomously after becoming subservient to global production processes and trade with foreign countries in international markets (e.g., dependent on imported face masks, pharmaceutical products and ventilators from abroad to meet national demand)" as stated by Lawrence (2020, p. 585). Therefore, any individual expressions of nationalism and autonomy become rapidly redundant within a global pandemic as it is not held back by closed national borders. But this pandemic had more consequences for people adjusting to lockdowns and enforced working from home. It created a new, but particularly challenging work environment, and disrupted the way most people used to work and connect (Jackowska & Lauring, 2021).

2.9.3 Leading change in difficult times

The pandemic and associated challenges caused business to lessen their capacity (Craven et al., 2020) and accelerated the work from home model. It stressed organizational operations, roles and responsibilities, values, culture, and modus operandi involving leadership style and practice.

Looking at leadership it can be characterized as a process of communication, motivating, influencing and encouraging individuals to act with the aim of achieving collective shared aspirations and objectives (Bennis & Nanus, 1985; Kotter, 1990; Kouzes & Posner, 1993).

This highlights the already mentioned dichotomy (see chapter 2.6.1) between management and leadership. Management is premised on planning and controlling, as well as achieving targets versus leadership building inspiration, motivation and especially a vision (Kotter, 1990; Northouse, 2021). We can differentiate, transformational leadership with capacity building, inspiration, motivation and shared goal accomplishment, versus transactional leadership focusing on leader-team exchange and commodification of relations (Bass, 1985; Burns, 1978).

It is alleged that effective leadership enables managing change successfully in critical times, which can result in a successful organizational transformation (Kotter, 1996). Therefore, effective or transformational leaders are vital for any change process (Ainscow, 2007; Burns, 1978; Northouse, 2021), but also need to have the important capacity of time and resources available to them. As a leader driving change management through motivating employees to go the extra mile, investing organizational effectiveness, evolving stakeholder commitment in order to address challenges of the pandemic (Bass & Avolio, 1994; Rees, 2018), is best driven by all those impacted working collaboratively and creating a culture of collaboration, trust, motivation, and effective leadership.

Uncertainty and rising intensity drive any leadership decision to have a major impact on leader-employee dynamics (Craven et al., 2020) and is often taken to be an essentially disputed notion (Northouse, 2021). Leadership resonates with building trust, loyalty, collegiality and motivation with employees and stakeholders to achieve the collective vision and objectives (Yukl, 2012) and suggests the ability to influence others to push change through the leader's personal example, qualities and contributions towards the change goal (Bennis & Nanus, 1985; Burns, 1978; Northouse, 2021).

Covey (2013) argues that an effective leader is seen as an integral part of the collective success, while the overall organization develops through effectiveness and change process, as well as leader-employee dynamics or stakeholder trust and commitment (Rees, 2018).

Summarizing one can state, "effective leadership is correlative of transformational leadership", (Ibeawuchi et al., 2021, p. 14). Achieving such things in a remote and virtual organizational environment is challenging, but effective leadership can take a greater effort in connecting people and acting without self-interest and to rise above any challenges (Kotter, 1990). Effective leadership must at the same time focus on result-oriented leadership methods and practices rather than attention on role, functions and structure (Rees, 2018).

Kouzes and Posner (1993) state that organizational culture and values represent a moral compass which leads decision making processes and (leadership) actions; they are as Ibeawuchi writes (2021, p. 15) "ineluctably the bases that provide equilibrium during crisis, chaos and transformation". The significance of values and/or culture cannot be neglected and be facilitated through effective leadership as some scholars highlight correctly in their publications (Hofstede, 1984; Kotter, 1996; Schein, 2010).

Based on an analysis on leadership undertaken by Ibeawuchi et al. (2021) leaders share three main principles and frameworks to succeed in uncertain times:

- Leading compassionately refers to a deep conscious recognition of difficulties and challenges that employees face in an anxiety-laden context.

- Leading authentically makes it the core component of leading effectively, advocating relational transparency, openness, and genuine actions.

- Leading adaptively and democratically. "The crop of leaders needed at the moment are those who have the humility to understand and appreciate that they do have possess all the answers to deal with the current state of affairs engendered by the pandemic. This also entails that both leaders and followers (partners) have to work collaboratively to share the responsibility of finding imperfect solutions, while recognizing that it may well take a long time, with some process of trial and error to find "best" solutions", (Ibeawuchi et al., 2021, p. 18). Democratizing by empowering people, engagement and debate and dialog to get rid of mistrust and suspicion.

2.9.4 Collaboration and communication

There is no doubt the pandemic accelerated digital transformation of organizations, the adoption of remote working and led to a critical need for frequent and quality communication between organizational management and employees (Connley et al., 2020). Such situations necessitate exceptional tasks and organizations require to adjust and improve external and internal operations to manage their workforce.

Shin et al. (2012) mention that in order to successfully execute and especially implement changes while reducing negative pushback a profound understanding of employee's thinking and behaviour is necessary. Unplanned change can cause issues and lead to uncertainties for employees, including resistance, resentment, and disengagement (Oreg et al., 2018).

The right tone and plan in communications during change in general, has long been acknowledged by many researchers (Barrett, 2002; Hiatt, 2006; Johansson & Heide, 2008;

Kotter, 1996; Kotter et al., 2021) as a fundamental determinant of how change is understood, interpreted, and managed by employees and especially its role in strategic internal vision making (Yue et al., 2019). To overcome resistance, decrease uncertainty, and support employees to embrace change, Elving (2005) suggested that organizations must communicate about the need, the process of and the subsequent impacts of the change, similar to Kotter (1996).

When employees are working remotely, synchronous communication becomes more challenging, and organizations therefore need to get comfortable with an asynchronous communication approach (Choudhury, 2020). On one hand communication on the other hand collaboration, not to forget that distributed colleagues cannot tap one another on the shoulder to ask questions or get help, Hobsbawm (2021, p. 25) argues "in a world dominated more and more as it will be by teleworking and intermittent physical presence, technology is definitely shifting from just being productivity-focused to collaboration-focused... and the ability to network without travel has enabled connections which would never have happened in an offline world".

We face another challenge in remote work as much workplace knowledge is not codified instead resides "in people's heads." This is a problem for all organizations, but much more so for those that have embraced work from anywhere approach. Now senior managers need to set an example on these fronts by codifying knowledge and freely sharing information while explaining that these are necessary trade-offs to allow for geographic flexibility.

2.10 The Nowhere Office

The actual office as we know it with its meeting rooms, break areas and opportunities for both formal and informal interaction has been around for such a long time that it is difficult to imagine without it (Choudhury, 2020). Nevertheless, in the past years working from home or anywhere except an office has obviously received "increased attention and additional meaning, as the proportion of people who worked from home experienced an unprecedented increase during the pandemic", (Da et al., 2022, p. 1).

2.10.1 The modern workplace

Chronicling the history of our association with work, Suzman (2020) highlights two pathways which demonstrate its overall development:

- First is the relationship between individuals and energy, as work is fundamentally always about an energy transaction and distinguishes us from inanimate matter, explaining that only living things search for and capture energy to live, develop and grow – which carries considerations around the nature and relationship of work.

- The second observes the human evolution and cultural journey from rough stone tools to powerful engines, energy draining machines and industrial scale entities. Considering how individuals developed new capabilities and purposefulness to a point where joy, meaning and satisfaction was an outcome of this motion for the individual. It demonstrates how progressively skill acquirement shaped interactions, experiences, and the world around.

Taking above into consideration we saw how the first industrial revolution coughed out of smoke-blackened chimneys coal-fired steam engines; the second dived from electric wall sockets; the third took formalized like an electronic micro-processor and during a fourth industrial revolution, the merger of new digital, biological and physical technologies, people were told that it to become exponentially more transformative than its predecessors (Suzman, 2020) while pursuing their work anywhere.

As our global environment of work is advancing radically and economies grow, organizations must be more agile and reactive to new demands from internal and external stakeholders, consumers, suppliers and especially employees (Leighton & Gregory, 2011). The flexibility demand of the 24/7 economy became inevitable and flexible labour markets turn out to be essential. Workplace flexibility drives an importance to the point that it ensures organizations can respond swiftly to the present dynamic economic cycle.

Leighton and Gregory (2011) published a book "Reinventing the workplace" where they stated that "It would be short sighted to sacrifice flexible working rights on the altar of short-term economic recovery, particularly because they can be complementary, in that greater availability of flexible working allows for a more inclusive labour market, expanding the size of the labour force and increasing output. Yet it would also betray a dangerously narrow interpretation of the responsibility employers owe toward not just their employees but also society at large".

That stated any company's office, as we have known it for the past decades, embodies everything society desires to: mobility, progress, consumption, status and wealth (Chevez & Huppatz, 2017), but due to a digital growing maturity and constant online connectivity more

people are expected to be working from home. As an outcome employee's perceptions of work environment's values shifted.

Already shaken by seismic shifts, the COVID-19 pandemic threw the modern world of work out of its state into an unplanned new revolutionary convulsion (Davis, 2016; Hobsbawm, 2021) in which a third of people state to never want to go back to a full-time job work merely in an office (Lambert, 2020). With a high level of certainty one can state that office life has possibly changed for the better in the past two years than in the last hundreds of years and the World Economic Forum's Future of Jobs Report (2020) projected as much as 44% of all future work to be remote.

The pandemic caused issues to erupt and surface which developed at least over for the past fifty years such as like flexible working hours, automation and digitalization, simple expectations of young generations entering the job market and question the whole topic of productivity and purpose while sitting in an office.

At the onset of the pandemic followed by rules of physical distance and isolation, when employees stopped commuting, stopped taking smoke breaks or gossiping in the hallways, and work pivoted through the forced upon home model (Criscuolo et al., 2020), it became very fast obvious that older assumptions and concerns about remote work were annihilated from one day to the next. Moral philosophy started stalking executives who only recently wondered if the organization was adequately equipped and structured to deal with future demands of work life (Chevez & Huppatz, 2017) from a day to the next these concerns evaporated.

2.10.2 A journey between diverse modes of work and the sick building

The 1930s skyscrapers epitomizing the work silo, or the single focus of work, profit and growth are disappearing, and the single one-size-fits-all place of work is becoming redundant. The new hybrid space will be multi-faced and accommodating in its design following cultural requirements and tailored to employee's needs. The Gladwell-esque tipping point (Gladwell, 2006) has reached the office space approach, and its new contours need to be investigated, evaluated and clarified so that guidelines for working from anywhere can better fit with employee's lives, but corporate requirements (security levels and privacy of data).

When addressing the so called "Nowhere Office", we need to consider that it can champion three interconnected topics (Hobsbawm, 2021):

- A place where people locate themselves to earn their salaries, which has always been a fundamental separation from the actual home and the workplace given.
- Time – as it needs to be re-evaluated how time is allocated and measured and provides new opportunities to re-evaluate time spent doing actual work.
- Social health or the challenge to remain connected safely, real, and present.

It is worth noting the various questions about the future of work that are neither knowledge nor office-based, but more including the future of skillsets, risks of automation, and of the role of diversity and inclusion in the workplace. The quality of work output will control how much of a shift the flexible remote work approach receives looking ahead. "It shouldn't matter whether the office is somewhere, anywhere, or nowhere; what matters is whether it is a place worth being", (Hobsbawm, 2021, p. 9).

Stress is a major impact on employees worldwide. As Orbach (2008) defines the place we work is also an emotional and passionate place for many employees. According to the State of the Global Workplace Report (Gallup, 2022), before the pandemic, commitment and wellbeing were increasing worldwide for nearly a decade are now stagnant. According to a research exercise performed by Gallup (2022) employees around the globe feel more stressed nowadays than back in 2020. This is impacted by about 44% of employees stating they felt a lot of daily stress carrying over from the previous day (see annex 11.2).

Prior COVID-19 impacting organizational and private lives, the European Agency for Safety and Health at Work (Milczarek et al., 2009) declared stress as the 21st century health epidemic and noted about 60% of working days are lost during a year due to workplace stress. Employer's ambition should be to create a place of work with a positive meaning and passion, no matter where the action of work will take place. In general, what becomes clear is that organizations need to substantially look at the way we they process future workspace for employees, their professional life in regards of how to do work, and evaluate work itself (Hobsbawm, 2021; Suzman, 2020).

2.11 Loss of mental equilibrium

Work, in theory, offers companionship.

"When working remotely people can miss the simple chat which can be emotionally valuable but which often also offers hidden intelligence with 86% of working professionals saying that the lack of spontaneous social serendipity was a "drawback", (Hobsbawm, 2021, p. 23).

But not only since the pandemic, levels of loneliness increased, already before as Hertz (2020) mentions in her book how atomized and isolated modern working life has become through our devices and digital connections, we all became alone together.

The decision for nationwide lockdowns brought all professional work activity and movement to a stop, work from home became compulsory, students had to access their classes online and business activity came to a grinding halt. This shift from an office place to a home continues in many cases post the pandemic and may become the new norm to prevent to continue spreading the virus (Tandon, 2020; Wolor et al., 2020). It is a fact that for most individuals the overall work situation change was not intended. This sudden unplanned and mandatory development, leaving many unprepared for the transition, results in a fact that existing literature on work from home may not be 100% valid to the pandemic situation (Carillo et al., 2021; Wang et al., 2021). Research indicated that productivity with a work from home approach increased almost to 47% in 2020 (Westfall, 2020), however this may not be truth in regards of the unplanned shift for everyone to work from their home.

The lack of social interaction has also put pressure on employees. Microsoft's Work Trend Index (Spataro, 2020) showed that 33% of the global workforce experienced burnouts due to extended workdays during the first lockdown, it also highlighted sources of stress being attributed to diminishing work-life balance (Gonzalez-Mulé & Cockburn, 2021), like isolation, disconnect and unimaginable workload. Other scholars (Jackowska & Lauring, 2021; Molino et al., 2020; Parent-Lamarche & Boulet, 2021) confirmed above and highlighted those employees working from home developed a high sense of insecurity, increased work–home conflict, and high levels of stress.

Mehrolia et al. (2020) highlight that a combination of three factors as potential catalysts resulting in increased risk of depression and loss of life: stress mixed with less control over work and lower cognitive ability. All applicable to people around the world living and working through the first lockdown of the pandemic.

Any job autonomy, meaning away from an office and supervisors, demands a cognitive ability to handle stress and is directly connected to depression and death of an employee (Gonzalez-Mulé & Cockburn, 2021). We need to consider that working from home not only brings autonomy, but less support mechanisms to handle work pressures, disconnect and isolation than working in a classic in-office setting (Majumdar et al., 2020).

Research by Cecily D. Cooper and Nancy B. Kurland (2002) described remote working employees often feel left out from the information flow then they would get when working in the office. Also, managers have difficulties observing mental issues like potential burnouts due to team dysfunction when only working remotely.

According to Carillo et al. (2021) the epidemic induced work from home inherited some characteristics of the conventional model, but seemed to have certain characteristics that made it unique with specific conceptual limitations.

- It was a mandatory requirement not a voluntary option for individuals who preferred going to an onsite office location (Kramer & Kramer, 2020).

- Then not only specific business or industries were impacted, but also other traditional occupations like education systems (Da et al., 2022), leading to employees across professions being forced to communicate in a virtual world (Cooper, 2021).

- Further, employees facing fundamental challenges due to missing space and resources at home (Kniffin et al., 2021).

We also need to consider the pandemic impact on work life to women specifically. The virus has collapsed work and home life balance especially for women who carry many roles such as homemakers or caregivers while pursuing their professional careers (Chattopadhyay, 2021). The home, historically and yet, in the majority modern households, barring a few exceptions, have been the domain of women and it is important to recognize that the idea of home as a safe place is subject of privilege. The pandemic and following lockdowns have intensified the vulnerabilities of women who suffer domestic abuse and partner violence (Kourti et al., 2021; Piquero et al., 2021). The transformation of the home space has been illuminating during the pandemic as the power structure was not in all women's favour.

In summary, the recent pandemic has released a plethora of issues affecting human health and emotional and mental wellbeing. "While the only constant is change, it is an equally universal fact that people by and large are resistant to change since its puts them out of their comfort zone", (Mehrolia et al., 2020, p. 2).

Working from home has pros and cons varying substantially according to personal circumstance, socio-economic class, age, class and particularly gender (Chattopadhyay, 2021; Hobsbawm, 2021).

A person's home represents a place of privacy, intimacy, and freedom. The onset of the COVID-19 pandemic followed by rules of physical distancing and isolation has shifted this view to renewed activities and attention. Inequality became an even bigger factor in identifying who benefits and who suffers professionally going forward. Drawbacks about working from home can involve isolation from the work culture, potential conflicts dividing between work and home activities, lack of control over employees, difficulties in teamwork, etc. (Crandall & Gao, 2005; Da et al., 2022).

As Microsoft's Satya Nadella mentioned in an interview (Sengupta, 2022) that employees will only come back to an office for each other and not policy.

3   SYNOPSIS OF THE RESEARCH STRATEGY

The empirical research of this dissertation is an approach of acquiring knowledge through observation and experimentation. In general, it involves collecting data through various means, such as surveys, interviews, experiments, and case studies, then analysing it to draw conclusions and develop inferences. However, the choice of research methodology and data analysis method depend on the research question, the type of data being collected, and the resources available. Some common data analysis methods include descriptive, inferential statistics, as well as qualitative analysis. Choosing the appropriate method and conducting the analysis rigorously is crucial for ensuring the validity and reliability of the research findings.

3.1   Quantitative analysis

The research approach of this thesis is through quantitative research data analysis, which allows for the examination of relationships and patterns in the available data.

The author of this thesis deliberately chose a quantitative research approach to try something new and different from the previous research done by the author and believed that a qualitative analysis would not provide new insights as a quantitative approach. Additionally, it was assumed that the decided research approach allowed for a more objective, systematic, and controlled examination of the pandemic phenomenon, which might have been beneficial in this certain research context and offer a fresh perspective on this topic.

Data analysis can be defined as the process of discovering useful information by evaluating data, quantitative data analysis is then the process of analysing data that is number-based or data that can easily be converted into numbers (Eteng, 2022; Salkind & Frey, 2021). It is based on describing and interpreting objects statistically and with numbers as it aims to interpret the data collected through numeric variables and statistics.

The attraction of quantitative data analysis is the expectation to turn raw data into meaningful information through the application of rational and critical thinking. It is usually associated with finding data evidence to either support or reject formulated hypotheses at the earlier stages of a research process through finding patterns, connections, and relationships (Gareth et al., 2021; Salkind & Frey, 2021). Yet, the same data within data collection can be

translated in many ways. It is therefore important to apply a logical, structured, and unbiased judgement.

This sample of primary data findings required to be critically examined and objectively interpreted through comparing it to other findings within the framework of the research e.g., the literature review. Findings conducted at the previous stage of the research needed to be aligned in order to reflect the opinion of the author and then connected with the data sets (Dudovskiy, 2022).

Salkind & Frey (2021) explain that quantitative data analysis involves the use of mathematical and statistical techniques, such as statistical inference, to gain insights from numerical data. It aims to answer questions related to the frequency, magnitude, or other numerical aspects of a phenomenon. The data is usually collected through methods such as surveys, questionnaires, experiments, or observational studies, but can also come from other sources such as website analytics or financial records (James et al., 2013).

Before the analysis can begin acquired data must be cleaned and pre-processed before analysis (biases and errors in the results), which includes tasks such as checking for missing or inconsistent data, and formatting the data in a way that is suitable for analysis. It is important that the data is collected using valid and reliable methods, such as using well-designed survey instruments, or following established protocols for observational studies (Hastie et al., 2009). Additionally, the data must be stored in a secure and organized manner, so that it can be easily accessed and analysed. If the data is not gathered correctly, or if it is not stored properly, it can lead to errors or inconsistencies in the analysis, which can compromise the validity and reliability of the research findings (James et al., 2013; Moore et al., 2021).

3.2   Target group

The target group of this empirical analysis includes employees from multiple organizations and institutes, and not limiting the focus on just one specific industry, organization, or institute. This approach allowed for a broader range of perspectives and a greater diversity of responses to be gathered, which can provide a more comprehensive understanding of the topic being studied. In addition, by studying multiple organizations and institutes, the findings of the analysis may be more generalizable and applicable to other similar entities.

The decision on sample size, time invested in reaching out to the participants, and availability of the targeted audience were critical factors in the planning phase of this survey-based thesis. The sample size was an important consideration because it certainly affected reliability and validity of the results. The aim of this thesis research was to acquire a large sample size to provide more robust and reliable results, but it also increases the time and resources required to collect the data.

The distribution of role variety within the sample also presented a crucial factor in the approach. Therefore, roles were distributed among both salaried and hourly employees, as well as across four career stages, which allowed for a more comprehensive understanding of the topic being studied.

Then the diversity topic presented an important aspect of this research. By including a range of experiences and perspectives (not only gender wise), but the analysis was also aimed to become more representative of the population being studied and to provide a more nuanced understanding of the topic. This was an important step in the to get a more inclusive and accurate picture of the population.

The a priori definitions of participant characteristics represented specific criterias that have been used to define and select the sample of this study. In this case, the participant characteristics that were defined were:

- Employed individuals who remained working through the past COVID-19 pandemic: This criterion ensures that the sample includes individuals who have been directly impacted by the pandemic and its effect on their workplace.

- Knowledge of what change management means: This criterion ensures that the sample includes individuals who have a basic understanding of the concept of change management.

- No necessity to have prior knowledge or have performed an organizational change process: This criterion ensures that the sample includes individuals with a range of experience levels and perspectives on change management.

- Language focus was on English speakers, but no necessity to be native English speaker: This criterion ensures that the sample includes individuals who can understand and respond to the questionnaire in English, which is the language used for the study.

These criterias helped to define the sample and ensured that this research was focused on a specific and varied population of interest. By defining the participant characteristics in advance, the author of this thesis was able to ensure that the sample reflected a representative of the population being studied and that the results can be generalizable to that population.

3.3   Testing of the questionnaire

Testing the questionnaire (annex 11.5) prior to launching the survey was critical in the research process. It helped to ensure that the questionnaire was straight forward, easy to understand, and free of any biases or ambiguities.

By sharing and reviewing the questionnaire with five senior academics from different countries and institutions, it increased the likelihood that any issues with the questionnaire were identified and addressed before the survey was published. This validation allowed a suitability check of the survey to the population being targeted.

Following academics reviewed the questionnaire prior launch:

- Austria – Program Director at the University of Applied Sciences in Eisenstadt
- Australia – Principal Researcher at Microsoft Cambridge
- Italy – Head of the International Institute for Applied Systems Analysis Library
- Ireland – International Institute for Applied Systems Analysis Repository
- United Kingdom - Communications Manager at The Club of Rome

The author of this thesis provided in advance to the individuals above an overview of the research work, shared the hypothesis, literature background, and requested feedback on specific questions related to the study:

- Comprehensiveness questionnaire: inquired if the questionnaire was thorough and covered all necessary aspects to test the hypotheses.
- Adequately covered the hypotheses: asked if the questionnaire was designed to test the specific hypothesis of the study.
- Missed questions: This question queried if there were any important questions that should have been included in the questionnaire but were not.
- Sensitive questions: This question was asking if there were any questions in the questionnaire that may have been considered too sensitive or controversial for the participants to answer.
- Length and time inquiring the length of the questionnaire and how long it will take the testers to complete it.

- Other feedback: This question was asking if there were any other feedback or suggestions that the proof-reader may had to be included in the questionnaire.

Feedback on the questionnaire was collected through both email and interviews via Microsoft TEAMS. This allowed the author to receive both written and verbal feedback, which avoided any misunderstandings interpreted from the feedback on the questionnaire. Input from these individuals was very constructive, and helped the author to improve the structure, depth, and length of the questionnaire. Some of the input was:

- It was suggested that conducting qualitative interviews might have been supportive to gather more individual experiences and deepen or illuminate issues that come up during the research process.

- This feedback was taken into consideration by the author, but as the research approach was stated in the beginning to exclude qualitative interviews, the author had to stick to the initial plan and methodology. This may be a limitation of the overall research of this thesis, but it is important to note that it was a conscious decision made by the author before the study was conducted (see chapter 1.1.1).

- Another item of feedback that was highlighted was the demographic question of nationality. It was suggested that a better approach would be to ask about the country of workplace, rather than nationality. This is because people are often moving and adopting new cultures and habits, and the local actions during the pandemic could influence a person's experience. For example, a person in India may have experienced the pandemic differently than an Indian person living in the UK. This comment was implemented into the questionnaire. This change helped to ensure that the questionnaire became more accurate and comprehensive in capturing the participants' experiences of the pandemic. Additionally, the country of workplace is directly related to the research, it will allow to understand how different countries handle the pandemic and its effect on the workforce.

Overall, all comments were reviewed and evaluated, and the questionnaire updated (see annex 11.5) accordingly. This step helped to ensure that the questionnaire was well-designed, questions clear, unbiased, comprehensive, and appropriate for the study. By making such revisions to the questionnaire the author aimed to increase the validity and reliability of the research.

3.4 Survey process and platform

The selection of data platform fell on the Enterprise Feedback Suite (EFS).

EFS is a professional solution for web-based surveys, and it is widely used for various types of research, including employee or customer satisfaction surveys and online market research studies. The platform has a web-based interface and good support and training documentation. It is also compliant with General Data Protection Regulation (GDPR), which is important for ensuring that the data is handled and protected according to the GDPR regulations. Nevertheless, in this analysis, no personal data relating to respondents was collected, which limited the risk of data breaches or GDPR violation.

The choice of data platform was an important consideration in the research process, as it can affect the reliability and validity of the results. Choosing EFS the author was able ensure that the data was handled in a reliable and secure manner.

Another benefit was that the University of Applied Sciences in Eisenstadt, Austria

provided the author of this thesis with a the EFS platform (as well as SPSS). This was significant support to conduct this research and access valuable technology.

The survey was online for 38 days starting with June 30th, 2022 (see annex 11.3).

The survey produced a return rate of 174 finished surveys or a completion rate of 32.34%. What this means is that out of the total number of people who accessed the survey, which was 538, 174 people completed the survey (see annex 11.4).

The completion rate, or the percentage of people who completed the survey out of the total number of people who accessed it, is an important metric in evaluating the success of a survey. A high completion rate indicates that the survey was well-designed and that the participants were engaged and motivated to complete it. A low completion rate, on the other hand, could indicate that the survey was too long, difficult to understand, or not relevant to the participants. It is important to note that the completion rate of 32.34% is a good return rate, as it implies that more than a third of people who accessed the survey completed it.

The collection of data excluded social network platforms such as Facebook, Twitter, LinkedIn, Mastodon, or any other platforms. The decision to not include these data sources was made because the target sample size was originally set at 100. Once that number was reached through the online survey, the author of this thesis refrained from tapping into additional data sources.

Using social networks as a data source can be a useful way to reach a large and diverse sample, but it is also important to also consider the potential biases that may be introduced when using these platforms.

The survey was anonymous, and the language of the questionnaire was set to English. Anonymity can help to increase the honesty and accuracy of the responses, and by setting the language of the questionnaire to English, it increases the chances of reaching a larger number of participants who are proficient in the language.

3.5 Data analysis

The survey data exported only included categorical data, which refers to data that can be divided into categories or groups. This can include data such as gender, age group, etc. or survey responses that are limited to a specific set of options (e.g., "strongly agree," "agree," "neutral," "disagree," "strongly disagree").

To prepare categorical data for the quantitative analysis, following steps (figure 15) were taken after the survey closed:

- Data cleaning: Removal of duplicate or invalid data.
- Data preparation: Encoding of received data (from EFS) into a numerical format for further analysis through Microsoft (MS) 365 Excel and SPSS v29.
- Data validation: Checking the data for errors or inconsistencies to ensure accuracy of the analysis.
- Data exploration: The export contained 14.000 data fields, which required editing, summarizing, and visualizing. Such large datasets can include errors where fields are completed incorrectly or left empty by accident (later was not the case in this survey). To avoid any defect in analysis, this data check was done to identify and clear anything out that could lead to an incorrect result.
- Then data coding had to take place involving grouping and assigning values to the original output. Here the author formed tables and structures in MS Excel to represent the data accurately, then to relate the output data to the variables of the survey either the IF or VLOOKUP formula was utilized.
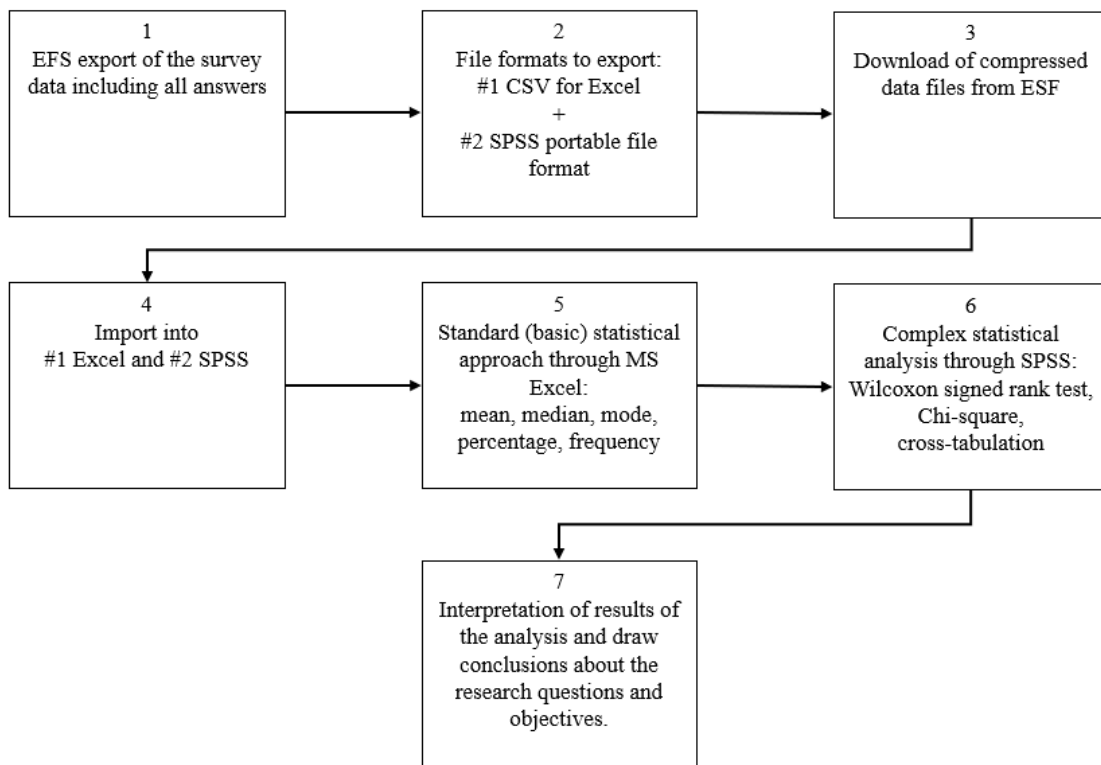
Figure 15: Data processing approach (own illustration)

3.6 Statistical approach

3.6.1 Descriptive statistical methods

Describing the main features of the dataset, providing a general overview of the data, including measures of central tendency (such as mean, median, and mode), measures of dispersion (such as range, variance, and standard deviation), and measures of shape (such as skewness and kurtosis) (Gareth et al., 2021; Salkind & Frey, 2021). This helped understand the main characteristics of the data, and was leveraged to identify patterns, outliers, and trends in the data through graphical representations such as histograms, box plots, and scatter plots, which helped to visualize the distribution of the data and identify any patterns or relationships. It is important to note that this first approach of descriptive statistics only provided a summary of the main features of the data and did not allow to make inferences or draw conclusions about the population that the sample is representing. A frequency analysis was applied to determine the number of occurrences of a certain group in the data and the percentage of observations in each group was then calculated.

3.6.2 Cross-tabulation

Also known as a contingency table or crosstab was used to examine the relationship between two categorical variables in the thesis to determine whether there is a significant association between two variables, and which specific categories of the variables are related or and identifying patterns in the data (Qualtrics, 2022).

3.6.3 Chi-Square test

These were applied to determine if there was a significant association between two categorical variables (Glen, 2022a). The main purpose of this test (Department of Sociology, 2023) is to determine if there is a significant association between two categorical variables (represented by the two dimensions of the contingency table) in terms of their influence on the test statistic (which consists of the values within the table).

3.6.4 Wilcoxon signed rank test

This method was used to compare two populations of data using two related samples (Glen, 2022b). It allows to test whether two related samples come from the same population and the same mean, by comparing the difference in scores between two sets of observations. It is also a non-parametric alternative method (Gorvine et al., 2017).

3.6.5 ANOVA variance analysis

Certainly, the author was also considering an ANOVA approach, also commonly referred to as variance analysis. However, this is only possible if the hypotheses and, above all, the data fit. To apply the ANOVA method, one could in principle consider the following:

- H1: T-test for connected samples (Organisational vs. Individual), whereby only differences between the two concepts would be examined. The extent (is an organizational change impact even there?) would have to be done through tests in above mentioned interferential methods.
- H2: Analysis of variance with measurement repetition (optimism vs. support vs. development vs. empathy), same as H1 – the approach also checks differences between the four concepts. The author has analysed this through above methods already.
- H3: Conceptually like H2.

The challenge of using ANOVA with the existing dataset is the data situation of the individual queries. H1: M1 and M2 are queried with different answer options. For T-tests and analyses of variance, one would have to "unify" the queries to M1 (so that the normal distribution requirement can be met), as well as M2. Technically, it can be constructed, but leads to a significant loss of quality in the scientific nature of your approach.

Then the next argument: the "scale consistency". Example H1M1 and H1M2: due to the different answer options, no consistent scale quality can be achieved.

Last ANOVA is used to compare means when the response variable is continuous. If the response variable is categorical as in this research approach, a chi-squared test or a nonparametric statistical hypothesis test like the Wilcoxon signed rank test may be more appropriate.

Ignoring above this is not good scientific practice, not mention this even worse. Fact is that a researcher should not ignore statistical method approaches and facts only to force a method like ANOVA (variance analysis).

During the inferential data analysis, the total number of respondents was in certain cases less than the original sample size due to missing or incomplete data, known as nonresponse bias. The difference was 0.1% and the author of this thesis left the sample size at 174.

3.6.6 Rating scales

Ordinal rating scales were mainly used in the survey (figure 16) and are a type of rating that assign a rank or order to response categories. The benefit of the rating scales approach was that it allowed the respondent to assign a certain value to an object or attribute, but also allows to disagree with a proposition (Tracy, 2022).

These scales proofed useful for this analysis for measuring attitudes, perceptions, or other subjective constructs because they allowed the survey participants to indicate the relative importance of each response category and was essential to provide clear distinct answer options.

Figure 16: Ordinal rating example of the survey (screenshot EFS)

3.7 Challenges of the analysis

There were/are several challenges that can arise when conducting quantitative analysis, and the common ones are: inaccurate data quality, too small sample size, measurement errors or wrong data interpretation.

However, conducting quantitative research after the late COVID-19 pandemic presented several challenges, some of these included:

- Data collection: With lockdowns and social distancing measures that were in place, traditional methods of data collection such as face-to-face interviews or surveys were not always possible. This required to use alternative methods such as online surveys, phone, or online interviews, which can raise concerns about data quality and representativeness.

- Sample bias: The pandemic could have disproportionately affected certain populations, leading to biased samples. For example, individuals who are older or had underlying health conditions at that time may have less likely participated in a study due to increased risk of severe illness.

- Data analysis: The pandemic may have had unpredictable effects on variables being studied, making it difficult to separate the effects of the pandemic from other factors. Therefore, other researchers may need to consider the use of statistical techniques such as propensity score matching or instrumental variables to control for these effects.

- Generalizability: The effects of the pandemic can vary by location and over time, making it difficult to generalize findings from one study to other populations or time periods.

- Ethical considerations: Researcher need to consider the potential risks and benefits of conducting research during a pandemic and obtain informed consent from participants while ensuring their privacy and safety.

- Difficulty in accumulation of data: Due to the uncertainty of a pandemic course, it may be difficult to predict when data will be available, and different countries have different rules and regulations regarding data collection and sharing during pandemics.

- Time-sensitive research: The pandemic was a rapidly changing situation and research findings may become quickly outdated.

Based on literature research quantitative research methods as Babbie (2020) and Alversia (2011) highlight also put an emphasis on objective measurements and statistical, mathematical, numerical analysis of data collected through questionnaires, surveys or polls, or by manipulating pre-existing statistical data using computational techniques. Therefore, no other statistical data except one's own has been used to evaluate the hypothesis.

Returning to the focus of this thesis of during the aera of a pandemic, an uncertain time, the reason for not extending the research on any war or political conflict situation, was the that conducting quantitative research in a war zone can present significant ethical and practical challenges. The threat of physical harm and emotional pain to researchers and participants can make data collection and analysis difficult and even impossible. Additionally, the unstable and rapidly changing nature of a war zone can make it difficult to predict what data will be available and when. As Osorio (2014, p. 1) argues "violence increases methodological problems of bias, measure validity, and causal inference". The effects of the war may vary by location and over time, making it difficult to generalize findings from a study to other populations or time periods.

One noticeable impacting challenge effecting this survey however was: while the survey was open to responses, there was a specific defect – out of office replies. Unfortunately, the survey started right at the beginning of the vacation season in Europe and the amount of out-of-office automated responses was noticeable.

4   EMPIRICAL ANALYSIS

This thesis leveraged a quantitative research approach and deployed an online survey to collect numerical data from a targeted group. The survey was designed to gather specific information needed to test hypotheses and establish cause-and-effect relationships. The target group was defined by specific characteristics, such as demographics, education, or employment. The data collected has been analysed using statistical methods to draw conclusions and make inferences about the population.

The approach for this thesis's quantitative, empirical analysis was utilizing an online survey platform to gather data, which process (figure 17) can be broken down into seven key steps:
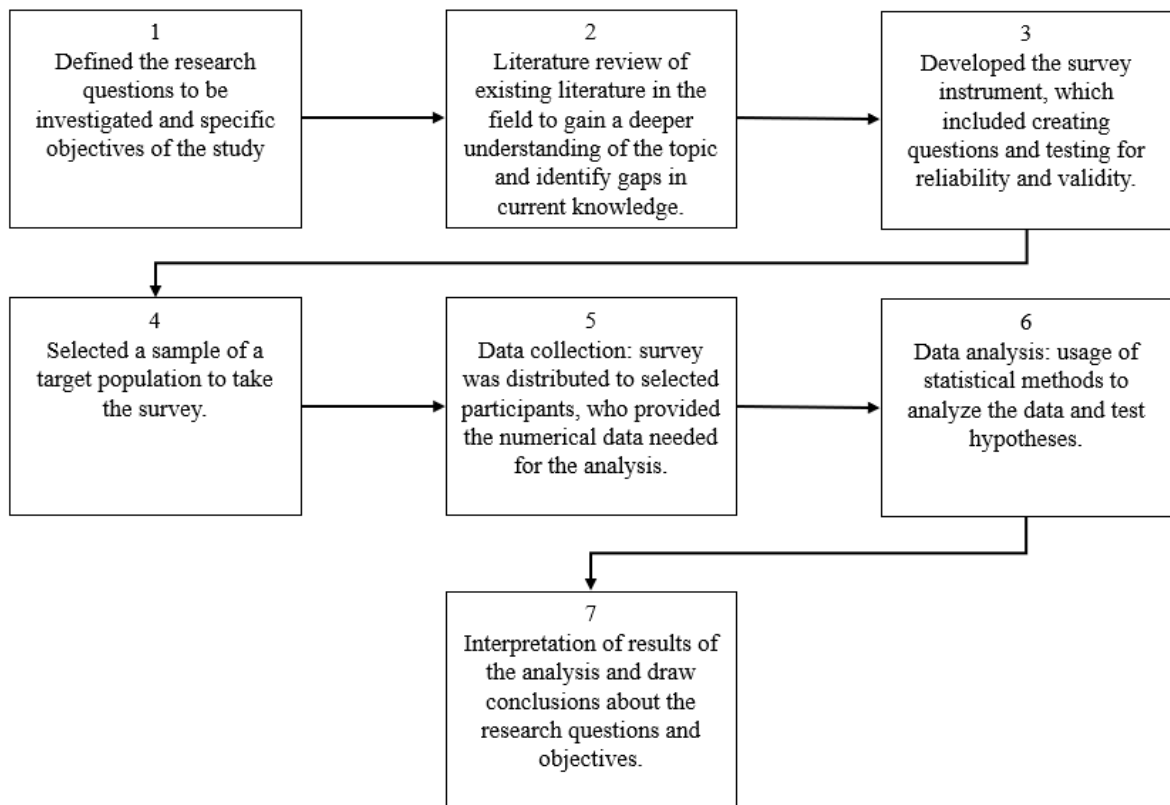
Figure 17: Process how the results for this research were obtained (own illustration)

These seven steps helped establish and adhere, during research, to a clear and well-defined research design and methodology.

4.1 Statistical evaluation

The survey started June 30th and went on until August 7th, 2022, the total number of days was 38. Figure 18 reflects the total sample of 538 versus the total number of complete replies 174.
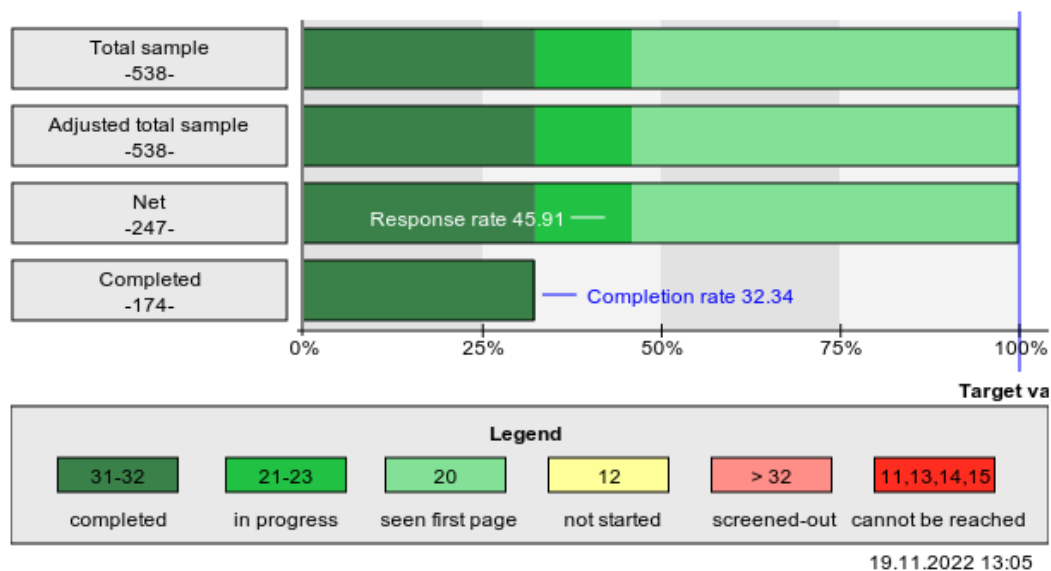
Figure 18: Participation period between 2022-06-30 and 2022-08-07 (screenshot EFS)

Additional information about the survey (table 12) provided by the EFS platform:

Table 12: Field report details

Total sample (Gross 1)	538 (100.00%)
Net participation	247
Response rate	45.91%
Completed surveys	174
Completion rate	32.34%
Mean processing time (arithmetic mean)	0h 16m 37.54s
Time of day with most accesses	Hour 18 Count 77
Average number of participants per day	18.55
Average number of participants per week	89.67

Source: EFS, retrieved 19/11/2022

It was an interesting observation (figure 19) that most responses took place in the first two weeks of publishing the survey, and then had another spike in week 3, which was possibly caused by an email reminder to the participant group from the author of this thesis.

Figure 19: Weekly access rate of the survey (screenshot EFS)

Information regarding the participant dropped out rate of the survey is provided by EFS (figure 20). One can see that once people passed H1M2, participants continued with the survey to the end. Unfortunately, it also shows that most dropouts were right after opening the welcome page of the survey: 298 (55.39%).

Figure 20: Dropouts by page (screenshot EFS)

4.2 Socio-demographic analysis

4.2.1 Diversity

The aim of this analysis was to reach a good level of diversity in participation. This should not only manifest in different gender, age but also cultural, educational, and professional background. The reason behind this criterion: everyone was generally in the same situation during the first lockdown of the COVID-19 pandemic and the assumption is, most of the population had to leave their workplace and transfer to work from home.

The first demographic view is presented in figure 21, showing the basic diversity spread across the four continents where data was retrieved. The data is based on feedback of the country of workplace and then categorized into continent.

Notable is that females responded in total 91 versus 83 males, and almost 10% more in overall numbers. The received data is balanced in Africa and almost in Asia. Female respondents in America and Europe slightly dominate the data. It will be interesting to analyse, if this slight female domination has an impact in questions such as mental equilibrium or the transformation of the home or work-life balance is later to be uncovered. Also, the educational and professional background will provide an additional perspective. Overall, to receive a balance in gender amongst the respondents has been achieved.

	Africa	America	Asia	Europe
■ Female	3	27	9	52
■ Male	3	21	10	49
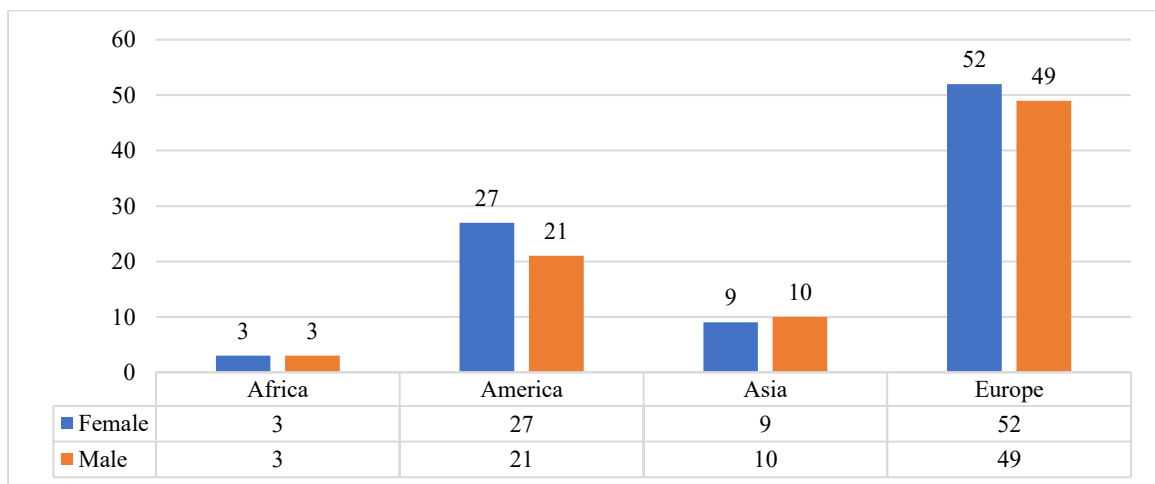
Figure 21: Diversity (own illustration)

The respondent's age spread across age groups provides (figure 22) a view that most respondents were born in the 1970ies, then followed by the 80ies. This concludes that most of the feedback comes from middle-aged individuals in life and professional careers. It also

will explain that we have feedback from people who potentially have been through building a family and/or career.
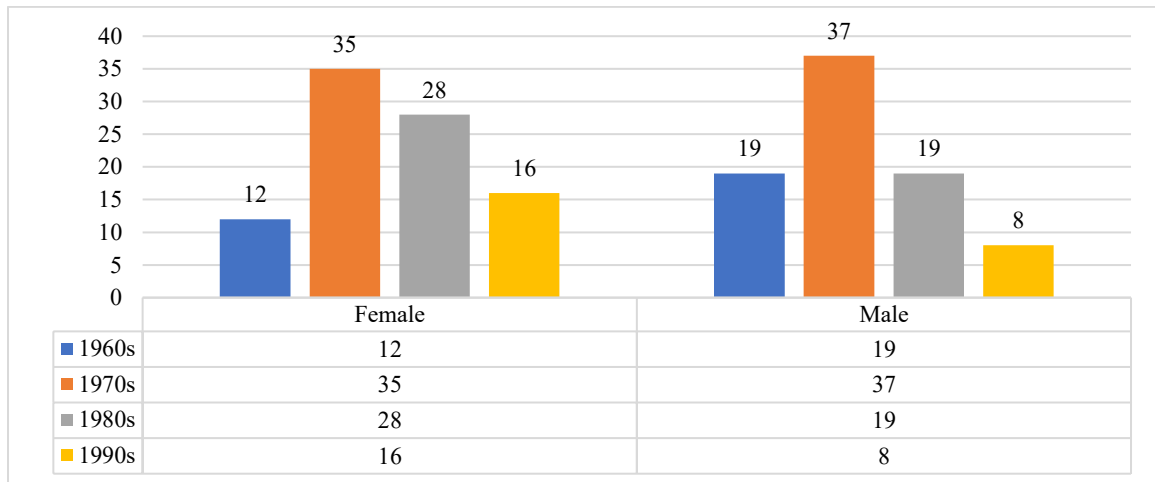
Figure 22: Year of birth (own illustration)

Same view from an age perspective (figure 23), one can observe a reflection of geographics relating to the previous information and can see the trend of 1970ies in Europe balanced across the gender. Majority of males in Asia 1970ies and when looking at America's male respondents being slightly more in the 1950ies than else.

This gender view can be twisted and turned, but the main take-away will be a balanced responded data across genders, and the majority born in the 1970ies.

Continents like Africa and Asia based on their response rate, could be neglected but will still be included in this thesis analysis.
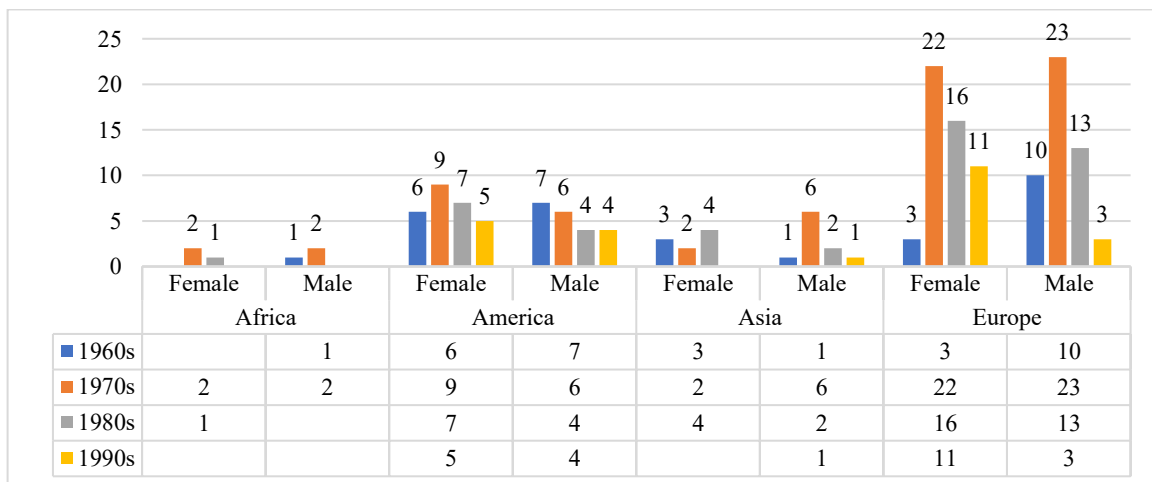
Figure 23: Age groups by continent (own illustration)

4.2.2 Education and Profession

We start with the educational background, here the data (figure 24) indicates slightly higher educational background for males than female, except in regards of the bachelor's degrees and an insignificant number of respondents (total of 3) having attended a trade school.

	Bachelor's Degree	High School	Master's Degree	PHD or higher	Trade School
Female	29	4	43	13	2
Male	15	5	45	17	1
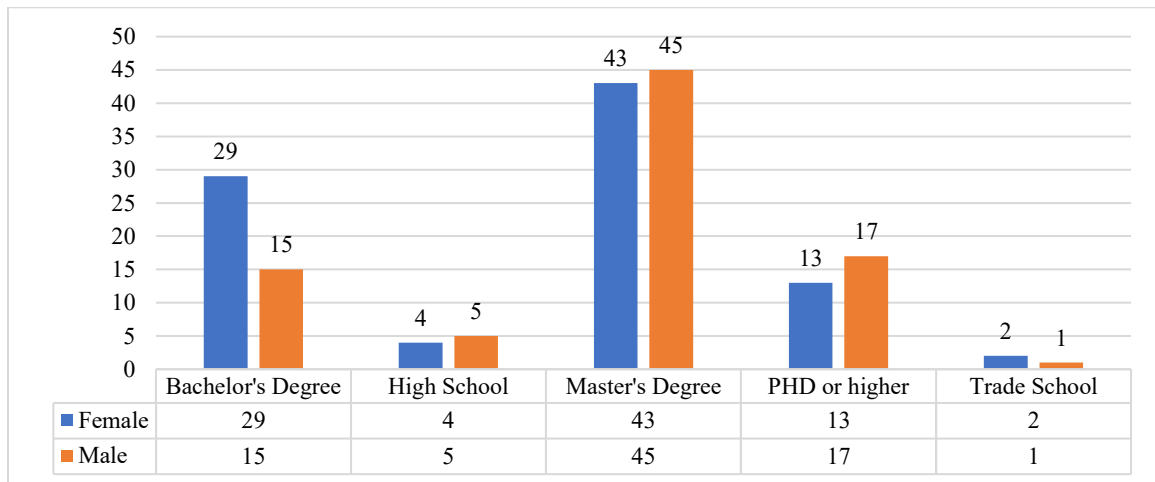
Figure 24: Educational background (own illustration)

The educational data suggests that Europe and America have the most significant impact in terms of education, likely due to a higher number of responses from these continents. It also highlights that most respondents have received higher education during their career development (figure 25).

	Africa	America	Asia	Europe
Bachelor's Degree		14	6	24
High School		2		7
Master's Degree	4	23	11	50
PHD or higher	2	8	2	18
Trade School		1		2
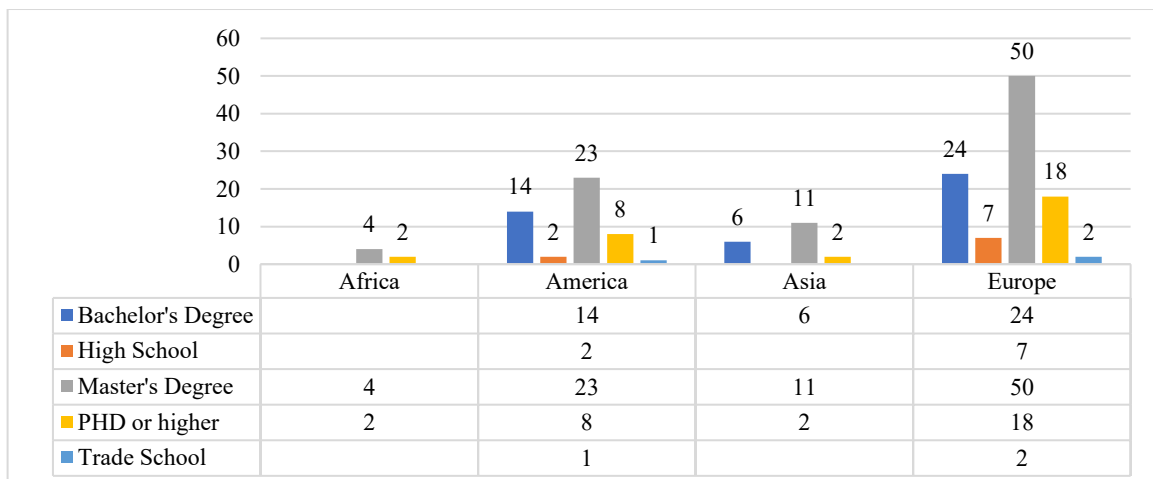
Figure 25: Education view by continent (own illustration)

Most individuals across all continents are full-time employed, as shown in figure 26 from an employment perspective versus almost none being unemployed.

	Female	Male
Employed Full-Time	76	79
Employed Part-Time	14	4
Seeking opportunities	1	
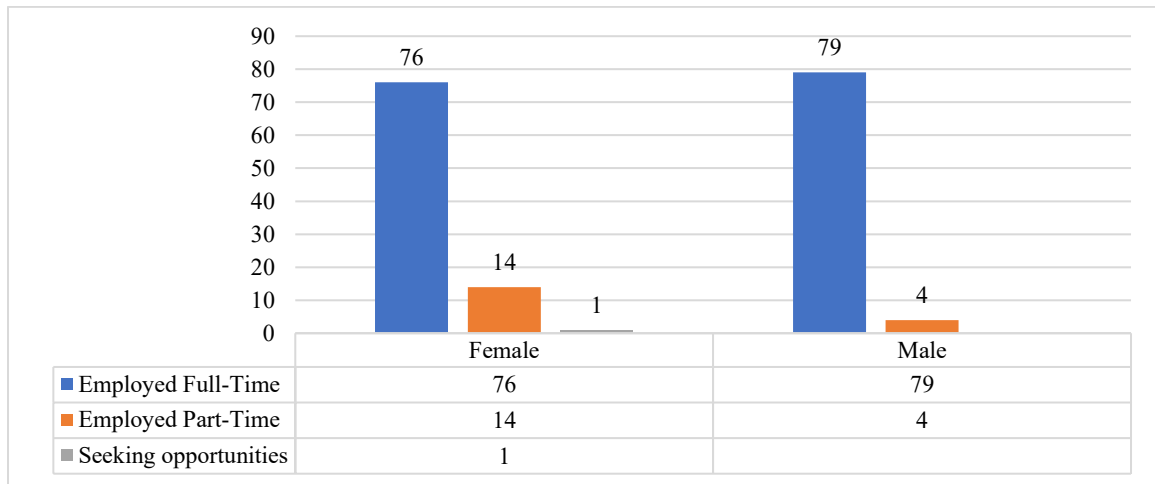
Figure 26: Employment (own illustration)

Figure 27 reveals an interesting gender discrepancy in career stages, with women predominantly in individual contributor and management roles, while men slightly lead in leadership positions. The results depicted challenge common gender expectations in the workforce, with women outperforming men in certain career stages and vice versa. Common gender expectations in the workforce often involve traditional gender roles, where men are assumed to hold leadership positions while women are expected to take on more supportive roles, such as individual contributors or managers.

	Female	Male
Individual contributor	49	41
Leadership	12	18
Management	30	24
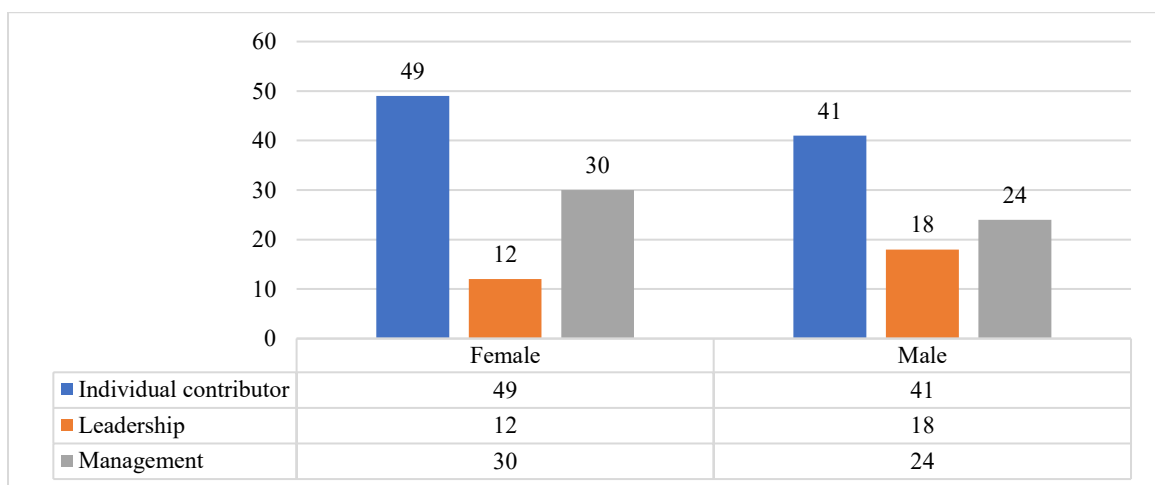
Figure 27: Career stage by gender (own illustration)

Figure 28 shows a dominant presence of multi-national corporations as the workplace for contributing individuals, with 73%, while academic institutions trail behind at 20%, almost a third less. It's possible that the dominance of multi-national corporations as seen in figure 28 could have implications on the research of the COVID-19 pandemic on remote work. Multi-national corporations, with their larger resources and infrastructure, may have had an advantage in enabling their employees to transition to remote work more smoothly compared to smaller organizations or academic institutions.
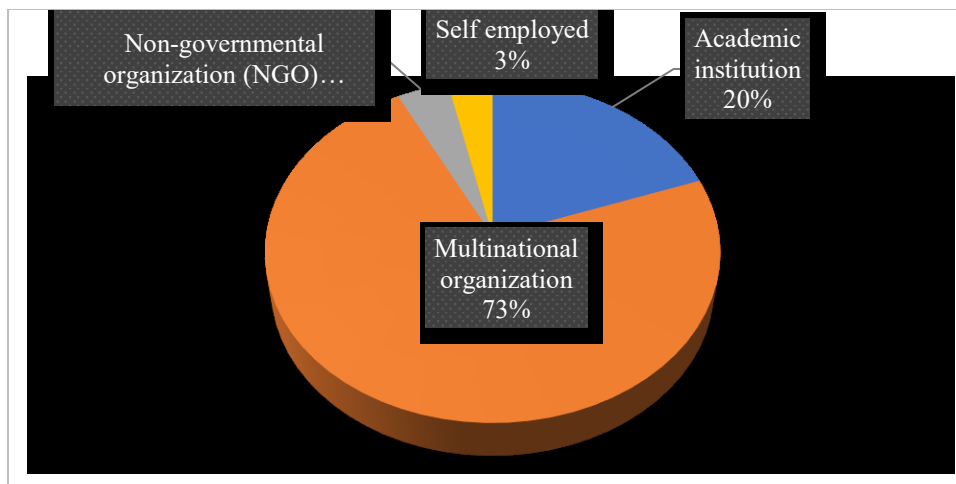
Figure 28: Company identification (own illustration)

When reflecting on how the team is setup (figure 29) where individual work (remote or on site), the majority with 68% voted yes. This may already be an impact of the new work situation so this variable will later be investigated more to understand the setup (see chapter 4.3).
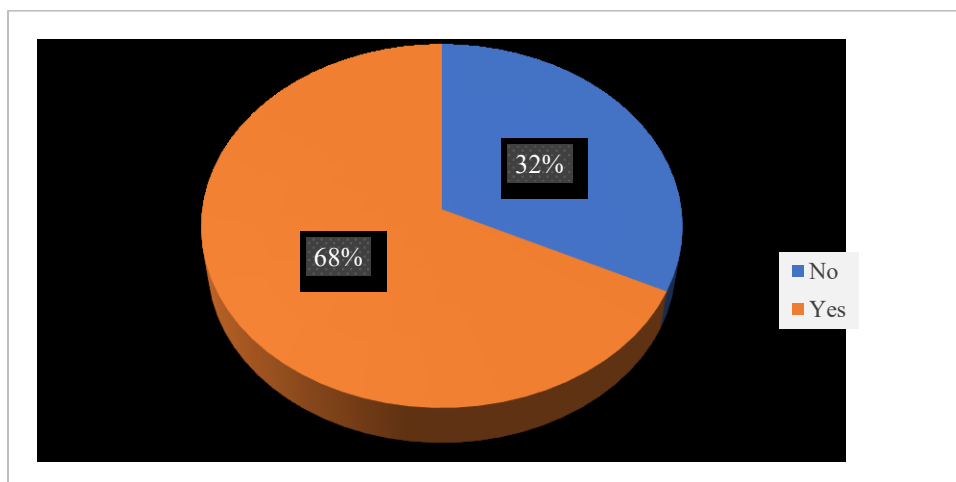
Figure 29: Remote work (own illustration)

We can see that remote work is already widely adopted across participants (figure 30) with engagement mainly towards remote teams with a preference of 68% for remote work.

	Female	Male
No	35	21
Yes	56	62
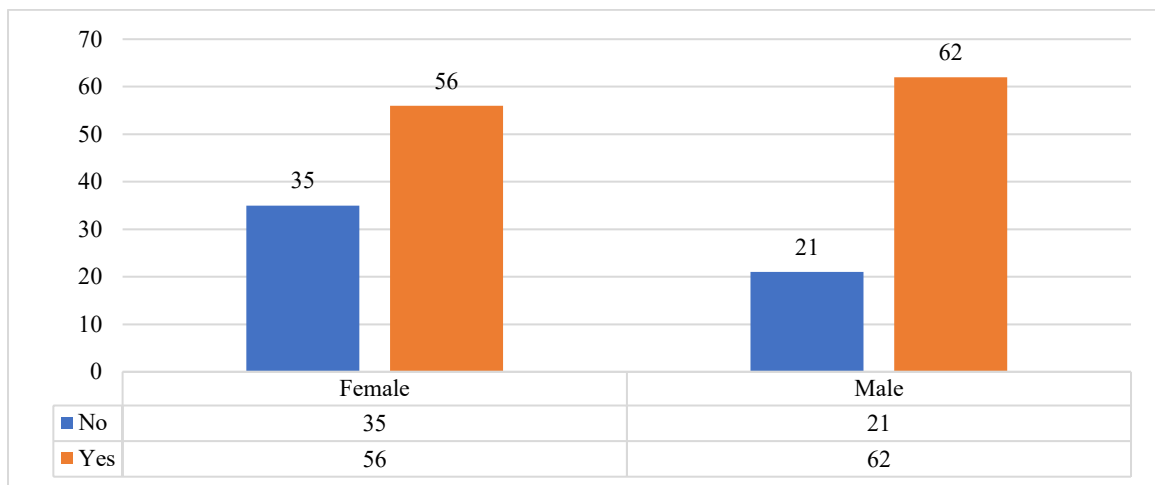
Figure 30: Virtual team setup by gender (own illustration)

Next in the demographic analysis is the view on job efficiency by own respondent evaluation. Earlier concerns by the author to find here more reluctant responses by a certain gender group did not materialize. We can find an even distribution (figure 31) of self-evaluation between females and males.

	Advanced beginner	Competent	Expert	Proficient
Female	3	12	40	36
Male	2	10	53	18
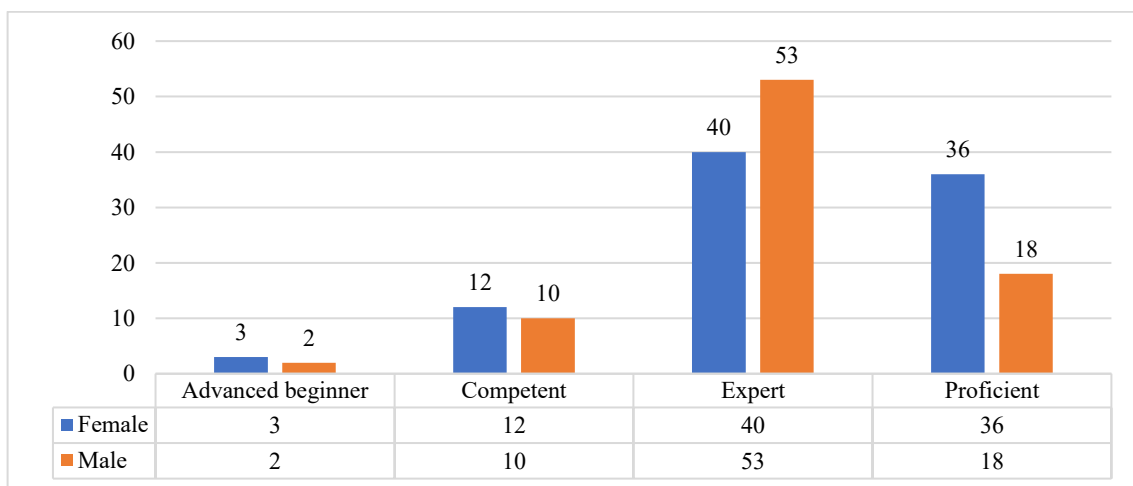
Figure 31: Job efficiency by gender based on self-evaluation (own illustration)

The results show that most respondents work in teams of less than 30 (figure 32). There may have been a misinterpretation of the question, as it's unclear whether the respondents are referring to their overall organizational team or their immediate team. However, this will not affect further analysis.
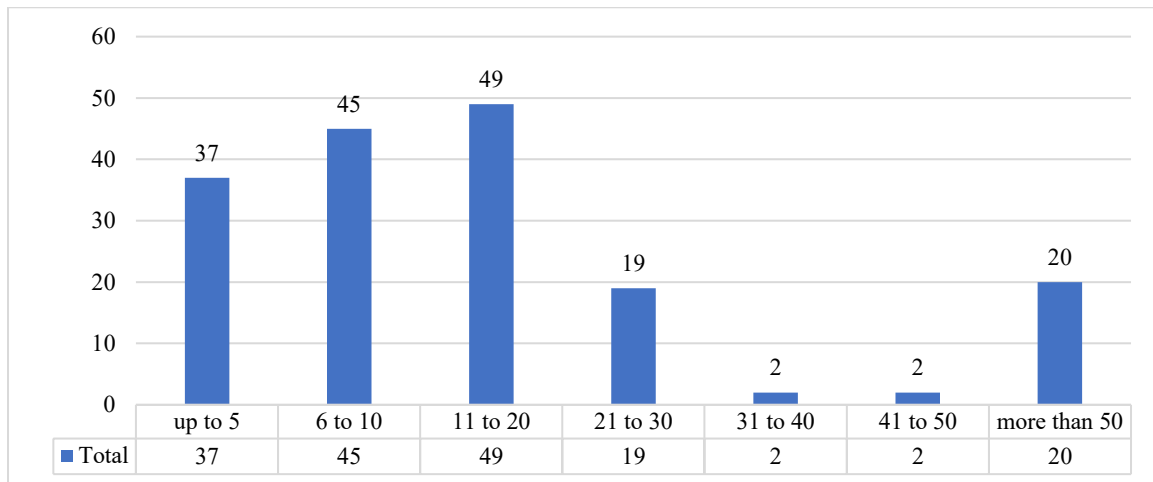
Figure 32: Team size (own illustration)

4.2.3 Summarizing the demographic analysis:

- A healthy diversity of respondents is available from the data, no trend towards a specific gender, but all balanced.

- Most respondents were born in the 1970s, which helps this analysis as these individuals have completed mostly their education, have created families and are in the middle of their professional careers. Therefore, the data input will be based on experience and competence (also relating to the next point).

- Many responders have received a higher education during their life and career development, highlighting in the spike in achieved bachelor which then leads to the master's degrees feedback, the 30 PHDs or higher educated form a strong third party in this demographic investigation.

- When looking at the employment status one could be early mislead assuming that females may dominate the part-time employment. In this demographic received data both female and male almost matched each other on in regards of employment status and almost all are full-time employed making the other job levels almost insignificant in this analysis.

- Even from a career stage perspective one can see a little higher ranking in individual contributors' roles with females than males, but overall, the data spread has no

significant spike. The differentiation between management and leadership may not be clear to all respondents evenly, but this will also not impact the later analysis.

- A clear indication that most people responding to this survey work in a multinational corporation, second with almost a third is academic institution, neglectable are non-governmental institutions (NGOs) or being self-employed.

- Two thirds declared to work remotely versus back in the office across all females and males. Here we may find different responses in the further analysis, as there is a potential that respondents were not aware if the work situation was pre or post the pandemic. Stil no impact on the analysis, potentially another attribute to include in the analysis.

- Based on a self-evaluation during the demographic questions in the survey one can find a trend towards more skilled professionals who responded to the survey.

- In regards of team size, the question may have been misleading as it does not clearly state if the team is part of a multinational corporation which would indicate more than 50 employees or if the respondents only looked at their immediate team. However, this defect will have no significance in later analysis.

4.3 Hypothesis validation

This section of the empirical analysis is used to determine the validity of the hypotheses (H1, H2, and H3). The validity of the hypotheses is determined by analysing the data and comparing it to the hypotheses. If the data supports the hypotheses, then they are validated or supported. If the data does not support the hypotheses, then they are invalidated or not supported.

The analysis will start with descriptive statistical outcomes and then move on to inferential results. Descriptive statistics summarize the data and highlight any patterns, trends, or significant findings that are relevant to the hypotheses. Inferential statistics, on the other hand, make predictions about a larger population based on the data collected from a sample. The goal of this section is to provide a clear and concise summary of the findings, including any relevant patterns, trends, or significant results that support or contradict the hypotheses.

4.3.1 Validation H1

The below table 13 gives a view of the validation of the first research question.

Table 13: Overview of 1st research question and its hypothesis

Research question 1	How can organizations foster relationships and nurture their employee's mental health while also planning for an uncertain future and drive growth?
Hypothesis H1	A change management approach requires two perspectives, an organizational perspective (how groups can be managed through a change) and an individual perspective (how people experience change), which require parallel focuses during the process to sustain both workforce health and successful business transformation.

Source: Own illustration

The aligned measurements (survey questionnaires) can be reviewed in figure 33.
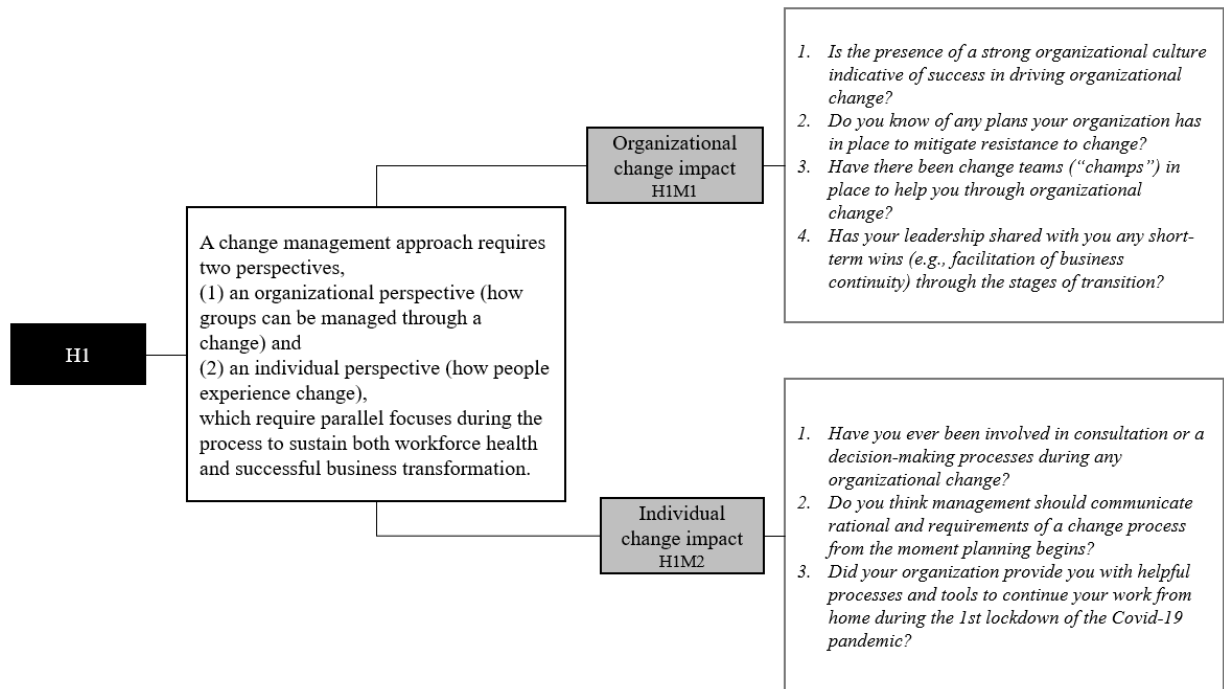
Figure 33: H1 measures and scoring setup (own illustration)

4.3.1.1 H1M1 – Validation

73% of the 174 respondents agreed or completely agreed that there is a need for an organizational culture when change is taking place in an organization (figure 34), 18% were not sure, and 9% disagreed with the statement of question H1M1-1.
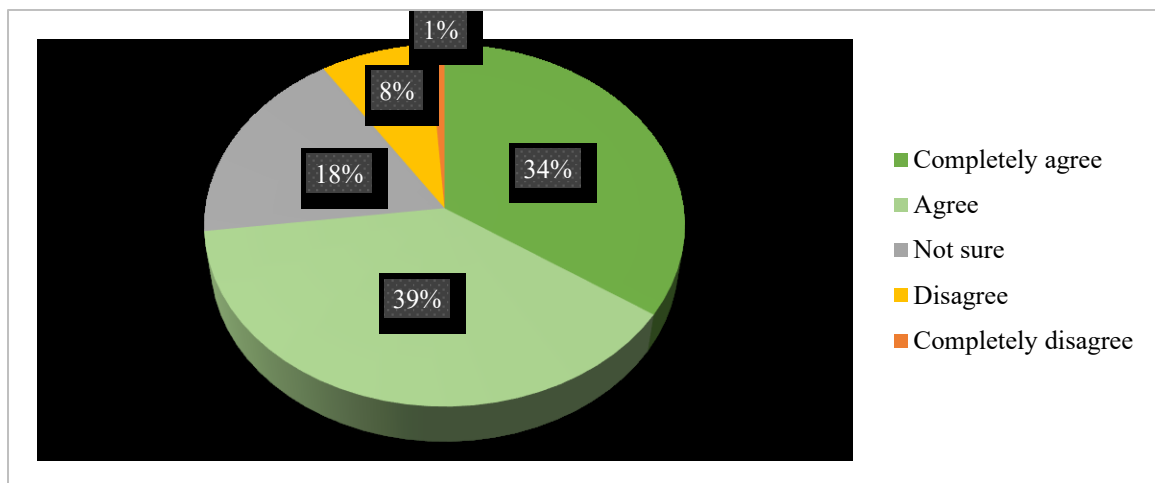
Figure 34: H1M1-1 overview (own illustration)

The results indicate that more women agree with the statement that there is a need for an organizational culture during change compared to men (figure 35). Only 7% of female participants disagreed with the statement.

	Completely agree	Agree	Not sure	Disagree	Completely disagree
■ Female	34	37	14	6	
■ Male	26	30	17	8	2
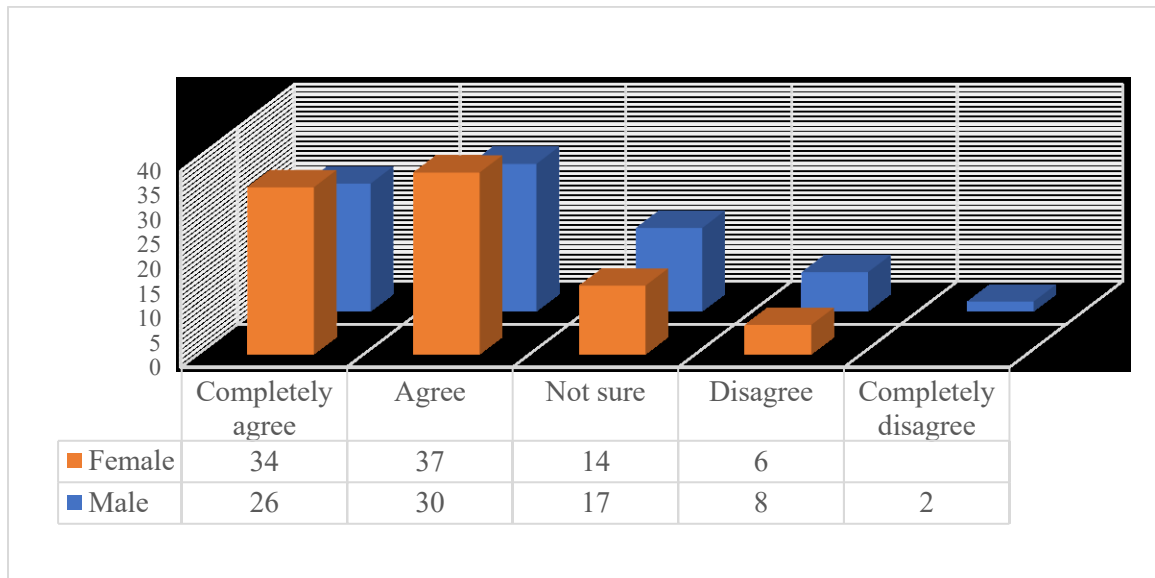
Figure 35: H1M1-1 response view by gender (own illustration)

It is interesting to view the data from a career perspective, specifically examining the role that leadership plays in supporting change through culture. The results (figure 36) indicate that the level of importance placed on culture involvement is highest among individual contributors and management, compared to leadership. This suggests that there may be a discrepancy in the level of emphasis placed on culture by different career levels.

Further analysis and exploration could provide insights into the reasons for this difference and its potential impact on organizational change.

	Individual contributor	Management	Leadership
■ Completely agree	25	24	11
■ Agree	36	20	11
■ Not sure	22	7	2
■ Disagree	7	2	5
■ Completely disagree		1	1
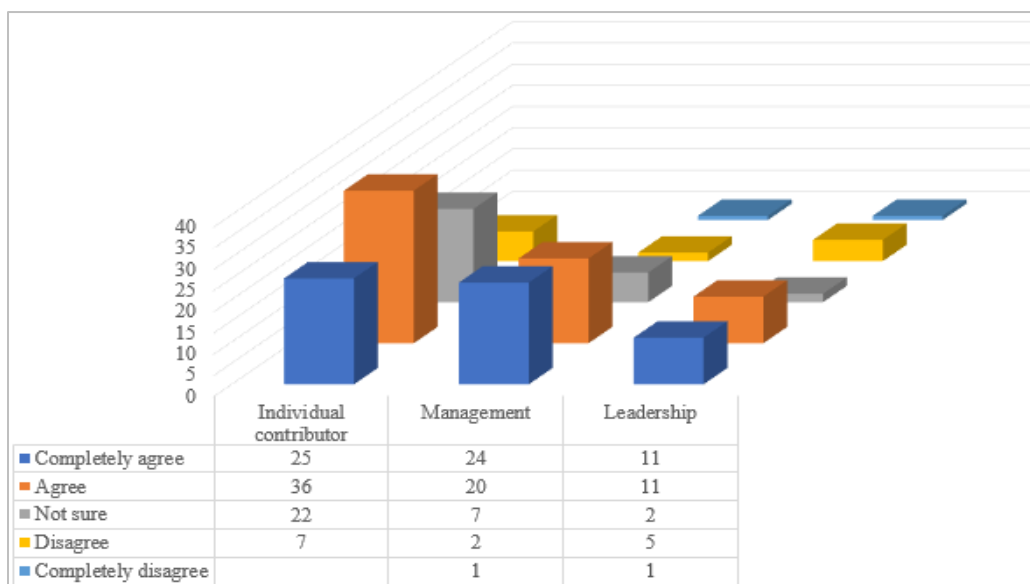
Figure 36: H1M1-1 career stage feedback on culture need (own illustration)

The results of question H1M1-2, which addressed the topic of resistance mitigation, showed a slight tendency towards disagreement (+10%) among the participants. However, this tendency was balanced by a significant portion (34%) of participants who were "not sure." The overview of the results (figure 37) shows that the responses were roughly divided into three equal parts, with a third of the participants agreeing, a third disagreeing, and a third being unsure. This indicates that there is a lack of consensus among the participants on this topic, with a significant portion of the participants having neutral or uncertain opinions. Further analysis and exploration could provide insights into the reasons for this lack of consensus and potential ways to mitigate resistance to change.
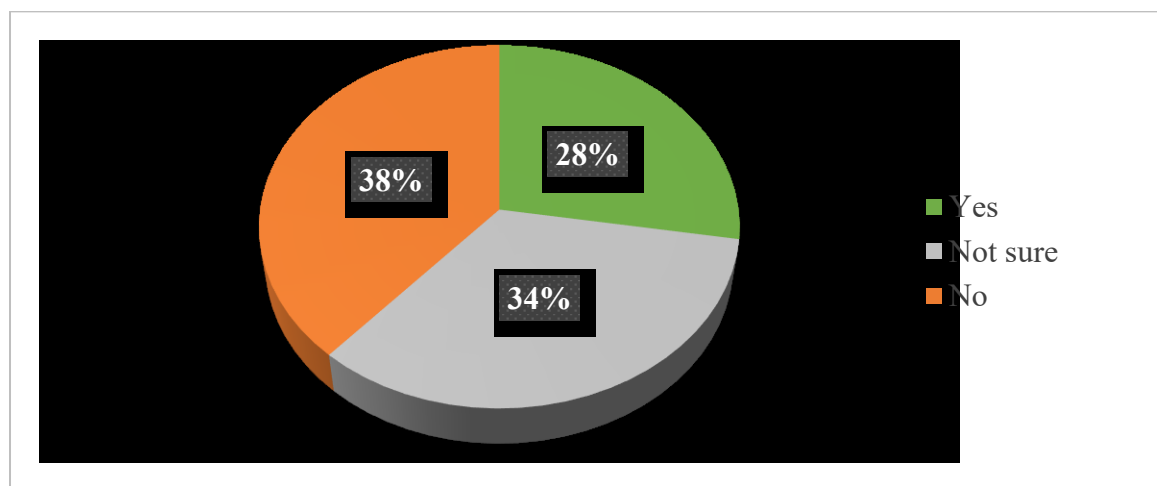
Figure 37: H1M1-2 knowledge of mitigation plans (own illustration).

The results, viewed from a career stage perspective (figure 38), showed that management and individual contributors were more likely to have negative views on resistance mitigation. They provided negative answers 1/3 more often than stating that they did not know about mitigation plans for a change process. A higher proportion of individual contributors tended to respond that they did not know or had a negative view on this question. On the other hand, leadership responses were split across the available answers, with no clear trend observed. This suggests that different career stages may have different perspectives and experiences with resistance mitigation, and that more exploration is needed to understand the reasons behind these differences.

	Individual contributor	Management	Leadership
■ Yes	23	17	8
■ Not sure	33	13	13
■ No	34	24	9
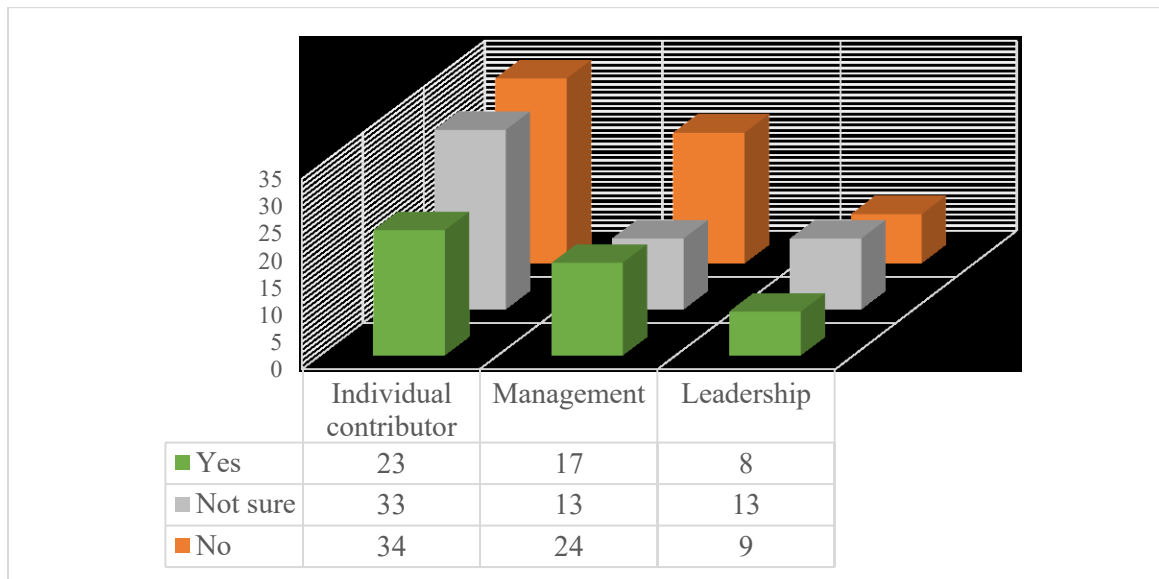
Figure 38: H1M1-2 knowledge of mitigation plans by career stage (own illustration)

The results of question H1M1-3, which asked about the existence of "change champions" during the change process, showed that almost 50% of respondents reported having had change champions in place to support them. However, there was also a significant portion (41%) of respondents who reported not having received support from change champions during their change process. The results (figure 39) highlight the importance of having change champions in place to support employees during change and the need for organizations to consider the provision of such support to ensure a successful change process.
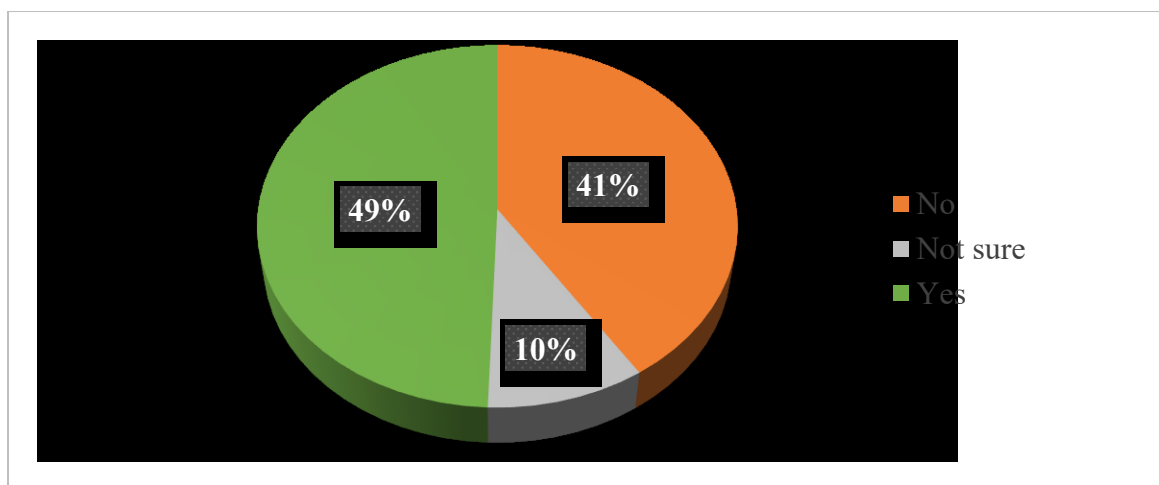
Figure 39: H1M1-3 change champs' overview (own illustration)

91

The results of question H1M1-4 (figure 40), which addressed motivational communication during change about wins, showed that 64% of respondents answered affirmatively (when combining "sometimes" with "yes"). However, it is important to note that "sometimes" is not always, and there may be instances when employees do not feel motivated during change. This highlights the importance of providing consistent and effective motivational communication to ensure employee engagement and commitment during change processes.

	Yes, all the time	Sometimes	Not sure	No
Total	26	86	19	43
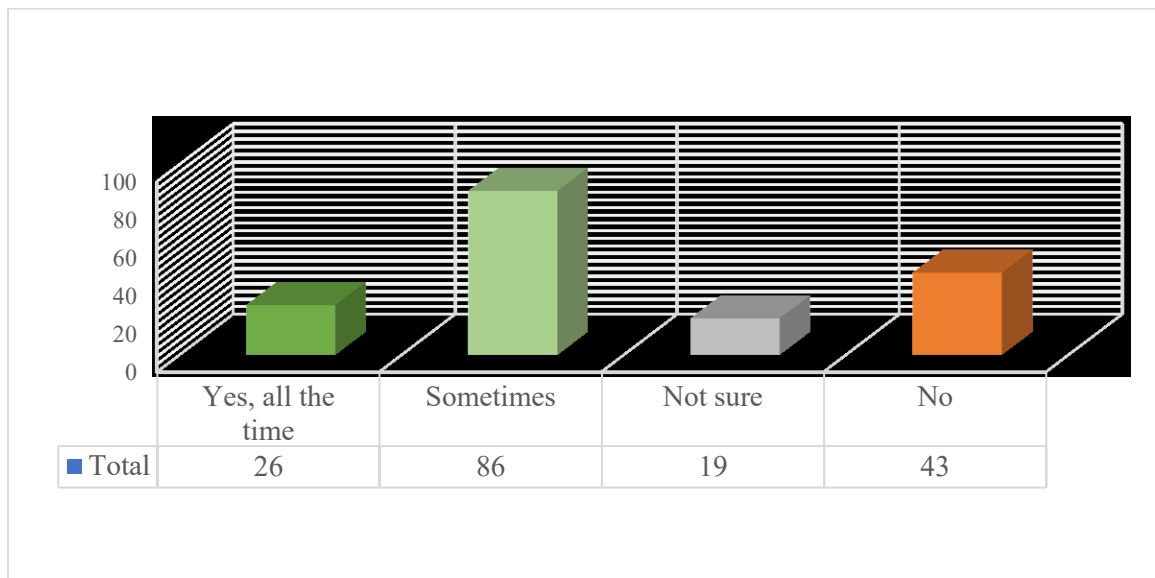
Figure 40: H1M1-4 short-term wins overview (own illustration)

As this question targets a leadership action, the career stage comes into mind, if people in leadership role's feedback stands out from the other (figure 41). It is interesting to see a slight majority in leadership rating this question positive, but not excessively.

	Individual contributor	Management	Leadership
Yes	40	29	17
Not sure	9	6	2
No	41	19	11
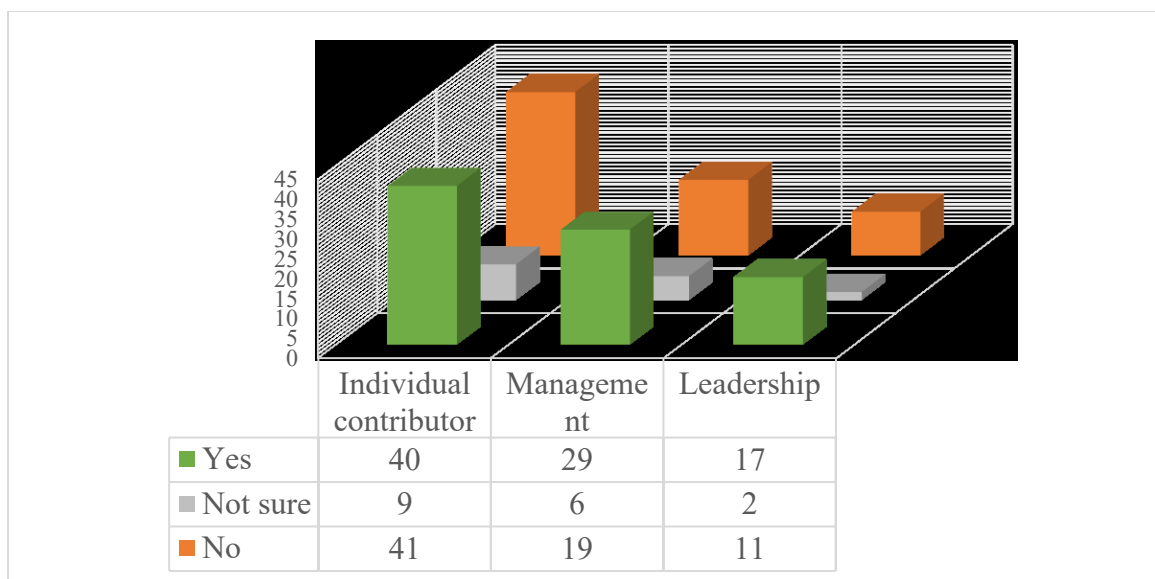
Figure 41: H1M1-4 career stage view on communication (own illustration)

The interferential data analysis results leveraging the Wilcoxon signed rank test for H1M1 is summarized in table 14 below:

Table 14: H1M1 – validation through Wilcoxon signed rank test

ID	Question	Wilcoxon signed rank test with continuity correction	Results
H1M1-1 111 Organizational Culture	*Is the presence of a strong organizational culture indicative of success in driving organizational change?* "Wilcoxon signed rank test with continuity correction data: v_55 V = 799, p-value < 2.2e-16 alternative hypothesis: true location is less than 3"	Test showed that people's median response (Median = 2..."agree") is significantly more positive than the neutral category 3..."not sure" (V = 799, p <0.001).	YES
H1M1-2 112 - Mitigate resistance	*Do you know of any plans your organization has in place to mitigate resistance to change?* "Wilcoxon signed rank test with continuity correction data: v_56 V = 3795, p-value = 0.9542 alternative hypothesis: true location is less than 2"	Test indicated that people's median response (Median = 2..."not sure") is not more positive than the neutral category 2..."not sure" (V = 3795, p = 0.954).	NO
H1M1-3 113 - Change champs	*Have there been change teams ("champs") in place to help you through organizational change?* "Wilcoxon signed rank test with continuity correction data: v_57 V = 5495, p-value = 0.2005 alternative hypothesis: true location is not equal to 2"	Test revealed that people's median response (Median = 2..."not sure") is not more positive than the neutral category 2..."not sure" (V = 5495, p = 0.201).	NO
H1M1-4 114 - Short-term Wins	*Has your leadership shared with you any short-term wins (e.g., facilitation of business continuity) through the stages of transition?* "Wilcoxon signed rank test with continuity correction data: v_58 V = 2709, p-value = 1.079e-10 alternative hypothesis: true location is less than 3"	Test indicated that people's median response (Median = 2..."sometimes") is significantly more positive than the neutral category 3..."not sure" (V = 2709, p <0.001).	YES

Source: Own illustration

4.3.1.2 H1M2 – Validation

Feedback for this questionnaire was that 62% had been involved in an organizational change process from an overall perspective. Trying to understand which career stage is most involved (figure 42) we can find a balance between individual contributors and involvement in management and leadership, especially leadership (97%) is here confirmed to be most engaged into the decision-making process than the other two groups.

	Individual contributor	Management	Leadership
■ Yes	45	38	29
■ No	45	16	1
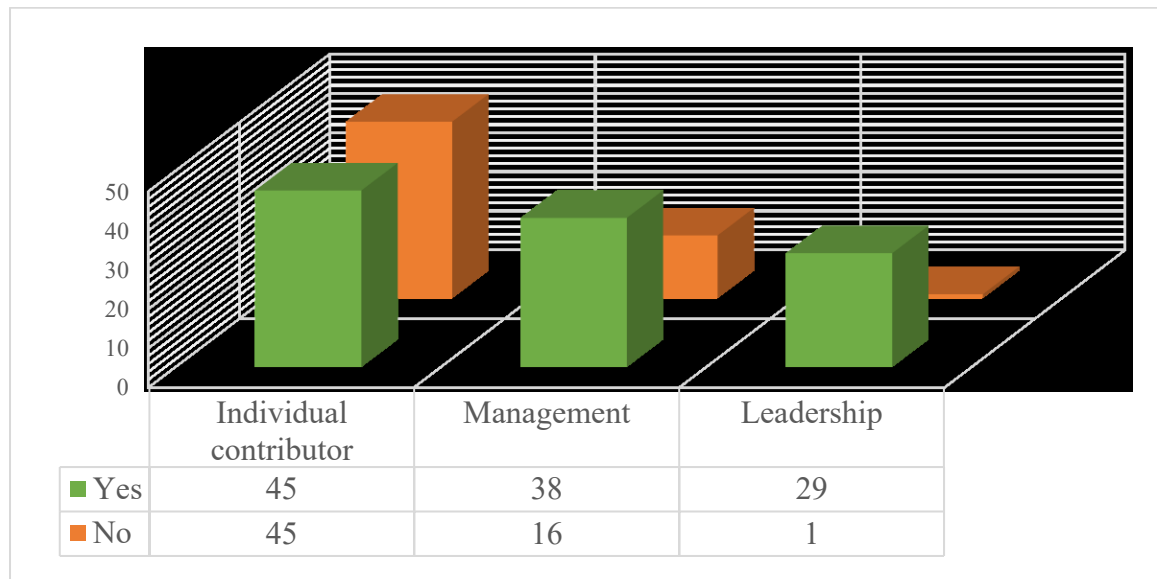
Figure 42: H1M2-2 decision making process career stage (own illustration)

The results of question H1M1-2, which addressed early communication during change, showed that 85% of respondents (figure 43) either completely agreed or agreed that management should communicate early during change. This high level of agreement highlights the importance of early and effective communication from management to support employees during change processes. Effective communication can help mitigate resistance, increase employee engagement, and enhance the overall success of the change.
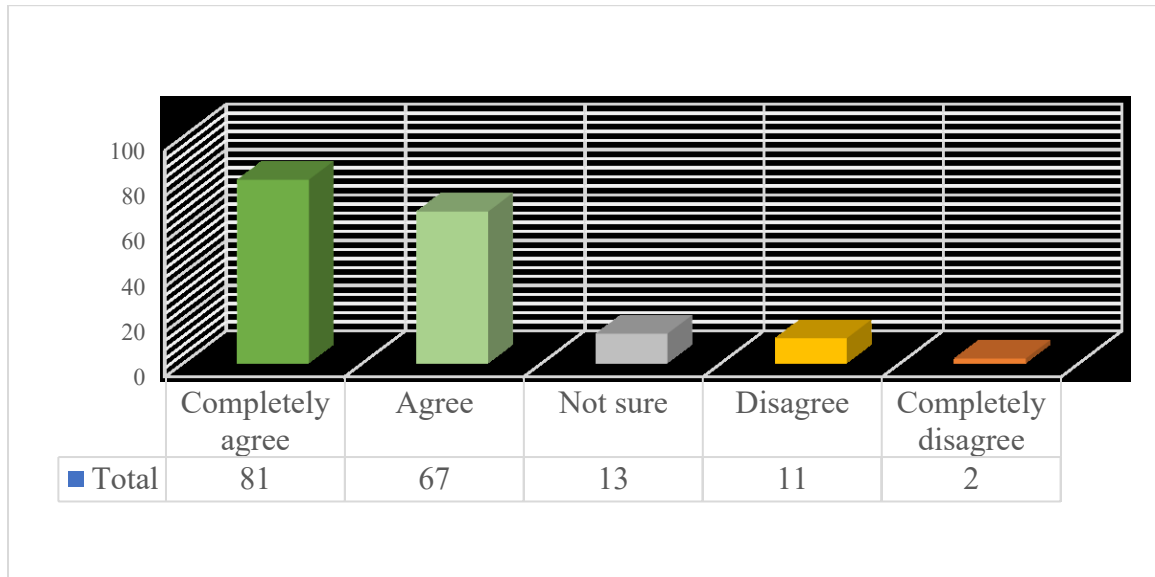
Figure 43: H1M2-2 management communication of change (own illustration)

The results of question H1M1-3, which asked about support for remote work during the first lockdown, showed a strong positive response rate of 86% (figure 44).

This suggests that many respondents felt that they received relevant support from their organization while working from home during the first lockdown. This highlights the importance of providing adequate support for employees during challenging times, such as the pandemic, to help them continue to perform their job effectively. Organizations that provide support and resources during times of change can increase employee satisfaction and reduce turnover, which can lead to long-term benefits for the organization.
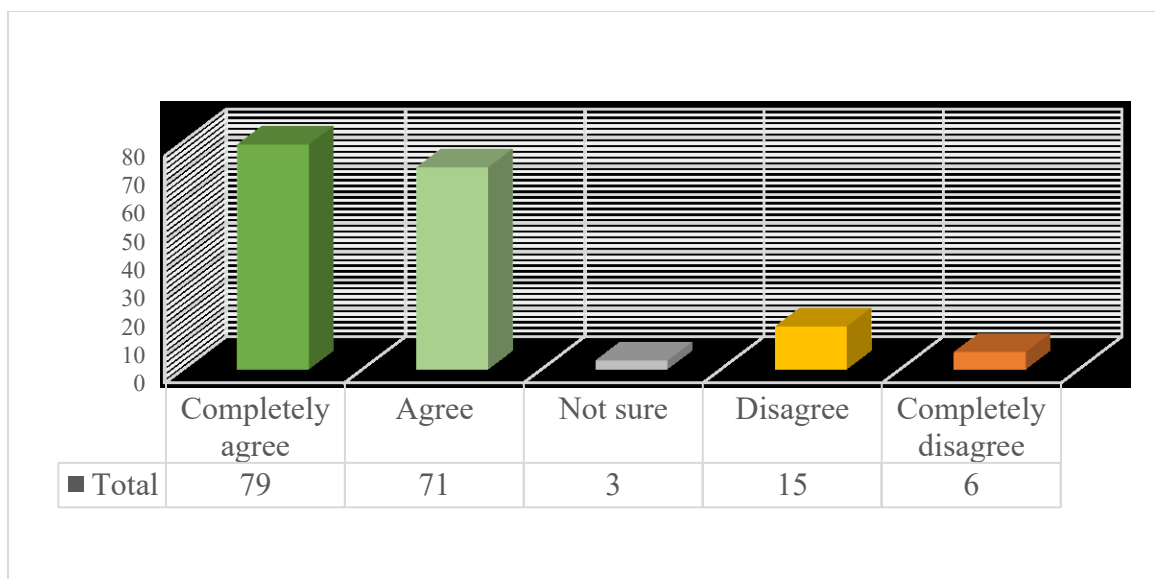
Figure 44: H1M2-3 support at the 1st lockdown (own illustration)

The interferential data analysis results for H1M2 are summarized in below table 15 as well as details of the cross-tabulation analysis:

Table 15: H1M1-2 validation through Chi-square and Wilcoxon signed rank test

ID	Question	Test	Results
H1M2-1 121 - Involved	Have you ever been involved in consultation or a decision-making process during any organizational change?	A Chi-square test indicated that people have significantly more likely been in consultation or a decision-making process than they were not (χ^2 = 10.81, p = 0.001).	YES
H1M2-2 122 - Communicate rationale	Do you think management should communicate rational and requirements of a change process from the moment planning begins?	A one-sample Wilcoxon signed-rank test indicated that people's median response (Median = 2..."agree") is significantly more positive than the neutral category 3..."not sure" (V = 666, p <0.001).	YES
H1M2-3 123 - Provide Processes	Did your organization provide you with helpful processes and tools to continue your work from home during the 1st lockdown of the Covid-19 pandemic?	A one-sample Wilcoxon signed-rank test indicated that people's median response (Median = 2..."yes, to a certain point") is significantly more positive than the neutral category 3..."not sure" (V = 1426.5, p <0.001).	YES

Source: Own illustration

A cross-tabulation analysis investigation of the relation between H1M2-1 (Involved, SPSS dataset 121) and H1M1-1 (Mitigate Resistance, SPSS dataset 112) results (table 16) that involved people are significantly more aware of mitigating resistance plans (χ^2 = 6.14, p = 0.047) than non-involved.

*Table 16: H1M2 - Validation via Crosstab analysis: 121 - Involved * 112 - Mitigate resistance*

			112 - Mitigate resistance			Total
			Yes	Not sure	No	
121 - Involved	Yes	Count	37	34	36	107
			34.6%	31.8%	33.6%	100.0%
	No	Count	11	24	29	64
			17.2%	37.5%	45.3%	100.0%
Total		Count	48	58	65	171
			28.1%	33.9%	38.0%	100.0%

Source: SPSS export

An additional cross-tabulation analysis (table 17) between H1M2-2 (Communicate rationale, SPSS dataset 122) versus H1M1-4 (Short-term wins, SPSS dataset 114) resulted that there is no link between the communicate rationale and short-term wins (χ^2 = 14.66, p = 0.261).

*Table 17: H1M2 - Validation via Crosstab Analysis: 122 - Communicate rationale * 114 - Short-term Win*

			114 - Short-term Wins				Total
			Yes, all the time	Sometimes	Not sure	No	
122 - Communicate rationale	Completely agree	Count	15	33	10	22	80
			18.8%	41.3%	12.5%	27.5%	100.0%
	Agree	Count	7	37	6	16	66
			10.6%	56.1%	9.1%	24.2%	100.0%
	Not sure	Count	0	8	2	3	13
			0.0%	61.5%	15.4%	23.1%	100.0%
	Disagree	Count	4	6	1	0	11
			36.4%	54.5%	9.1%	0.0%	100.0%
	Completely disagree	Count	0	2	0	0	2
			0.0%	100.0%	0.0%	0.0%	100.0%
Total		Count	26	86	19	41	172
			15.1%	50.0%	11.0%	23.8%	100.0%

Source: SPSS export

4.3.2   Validation H2

An overview of the relation of the second research question to the corresponding hypothesis is shown in table 18 below:

Table 18: Overview of 1st research question and its hypothesis

Research question 2	How much flexibility in workforce management does leadership have during transitioning through uncertain times?
Hypothesis H2	People and teams must be supported by management with empathy and optimism, which will foster focus on what can be controlled as opposed to being consumed by chaos.

Source: Own illustration

Hypothesis validation is established through the following questionnaire (figure 45):
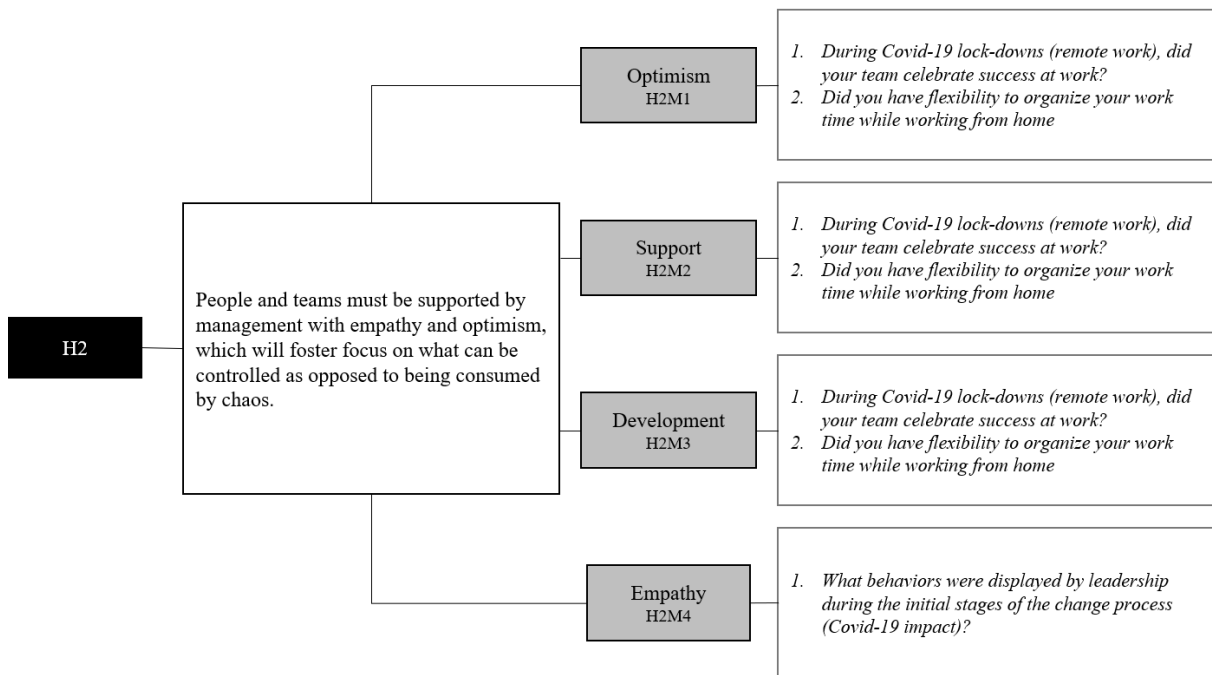
Figure 45: H2 H1 measures and scoring setup (own illustration)

4.3.2.1   H2M1 – Validation

The results of the survey on remote celebration (H2M1-1) show that a majority of 69% of respondents engaged in remote celebrations while 18% did not participate (figure 46). These findings suggest that remote celebrations have been adopted by a significant portion of the respondents.

	Yes, for almost any reason possible	Sometimes	Not sure	We tried but did not go well	No, we did not try
■ Total	43	77	9	13	32
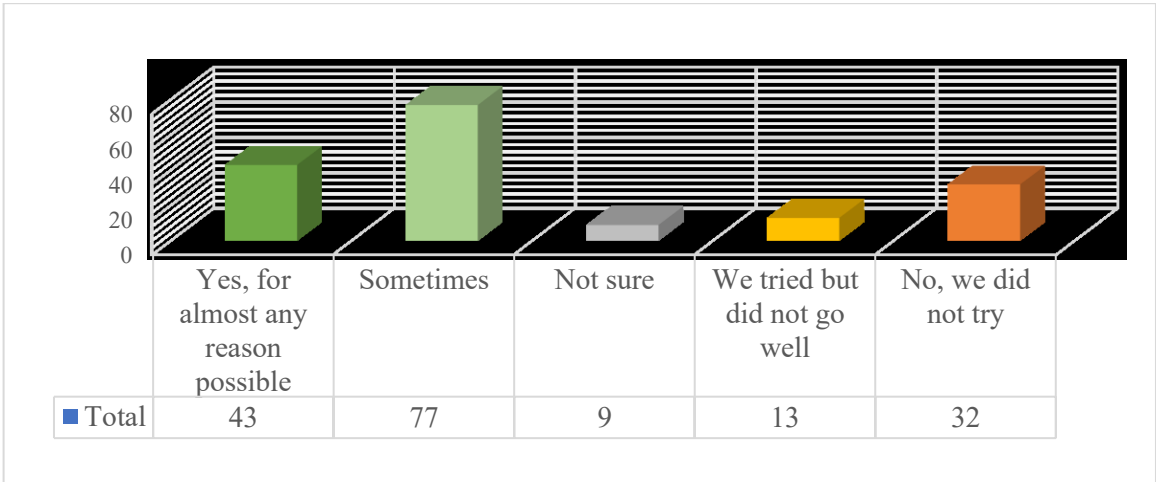
Figure 46: H2M1-1 celebrating success overall (own illustration)

Analysing the data on celebrating success remotely further to identify any differences across the continents, it can be observed that there is a balance in Europe between celebrating or not celebrating (figure 47).

	Yes, for almost any reason possible	Sometimes	Not sure	We tried but did not go well	No, we did not try
■ Africa	3	2	1		
■ America	11	24	2	4	7
■ Asia	5	9	2	1	2
■ Europe	24	42	4	8	23
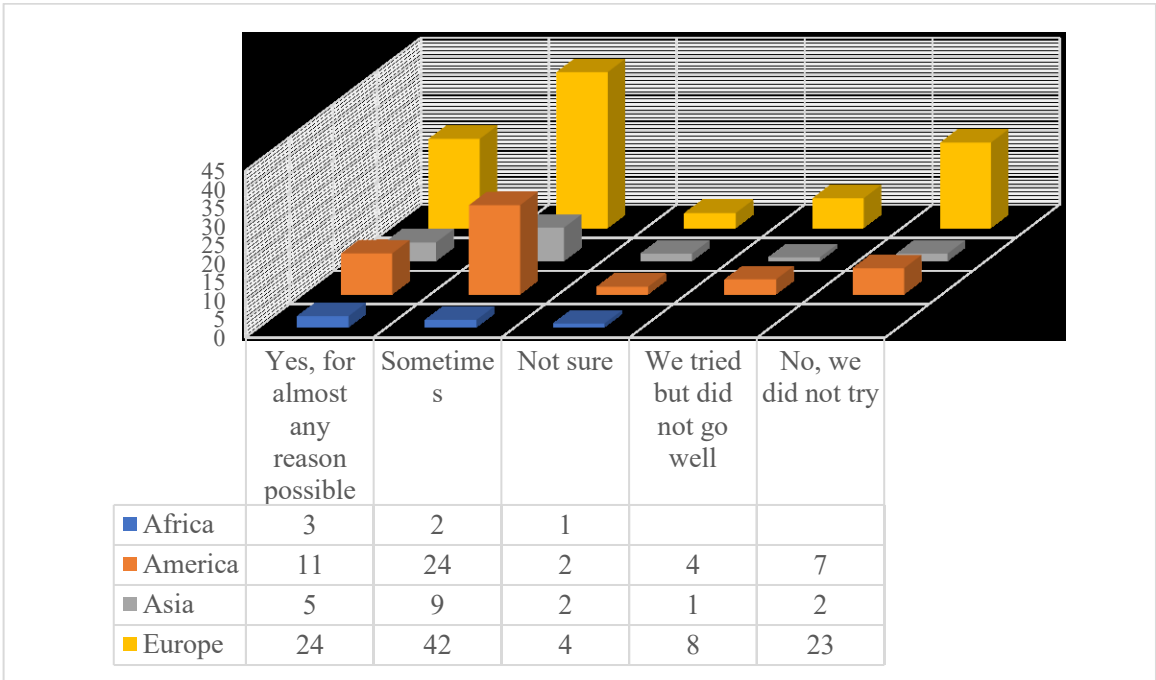
Figure 47: H2M1-1 celebrating success across continents (own illustration)

It is important to note that these results might reflect cultural differences and it may be useful to conduct further research to understand the underlying reasons behind these differences.

In conclusion, the analysis of the data for celebrating success remotely does not show any significant differences across other variables such as gender, career stage, or company size.

The only notable difference is seen in the age group, with people born in the 1970s showing (figure 48) the highest tendency to celebrate their successes.

	1960s	1970s	1980s	1990s
■ Yes, for almost any reason possible	8	25	7	3
■ Sometimes	17	25	26	9
■ Not sure	2	2	3	2
■ We tried but did not go well		8	2	3
■ No, we did not try	4	12	9	7
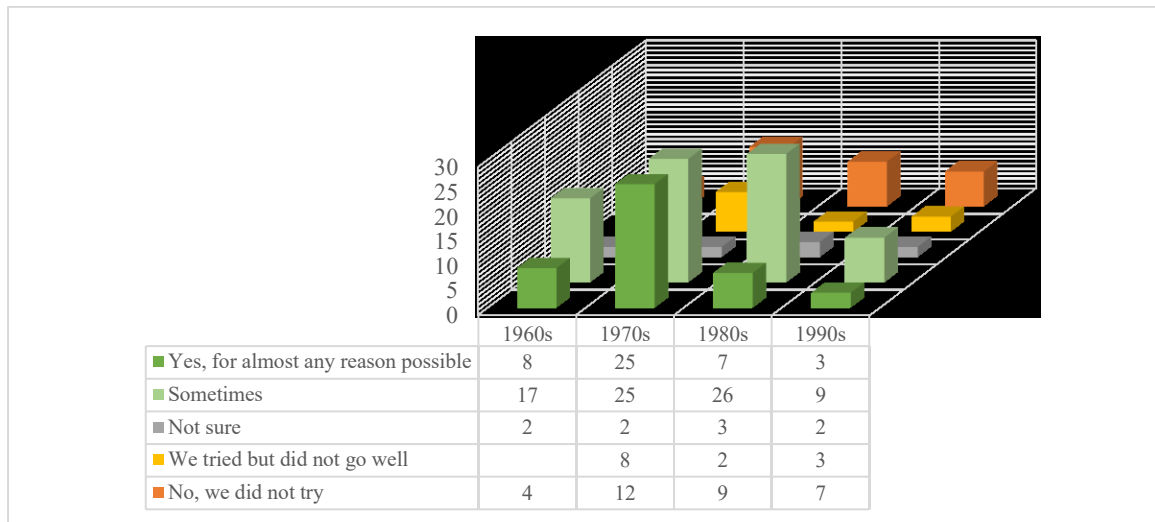
Figure 48: H2M1-1 celebrations across age groups (own illustration)

The response rate to the question on time management (H2M2-2) during the lockdown showed that 62% of respondents answered "yes" to having good time management (figure 49), and there was no difference across gender. It can be assumed that most respondents found it possible to organize their time effectively during the lockdown. However, it is important to note that this result does not consider the reasons why the remaining 38% of respondents answered "no." Further investigation may be necessary to fully understand the impact of the lockdown on time management.

	Full flexibility	Some flexibility	Not at all
■ Total	107	55	12
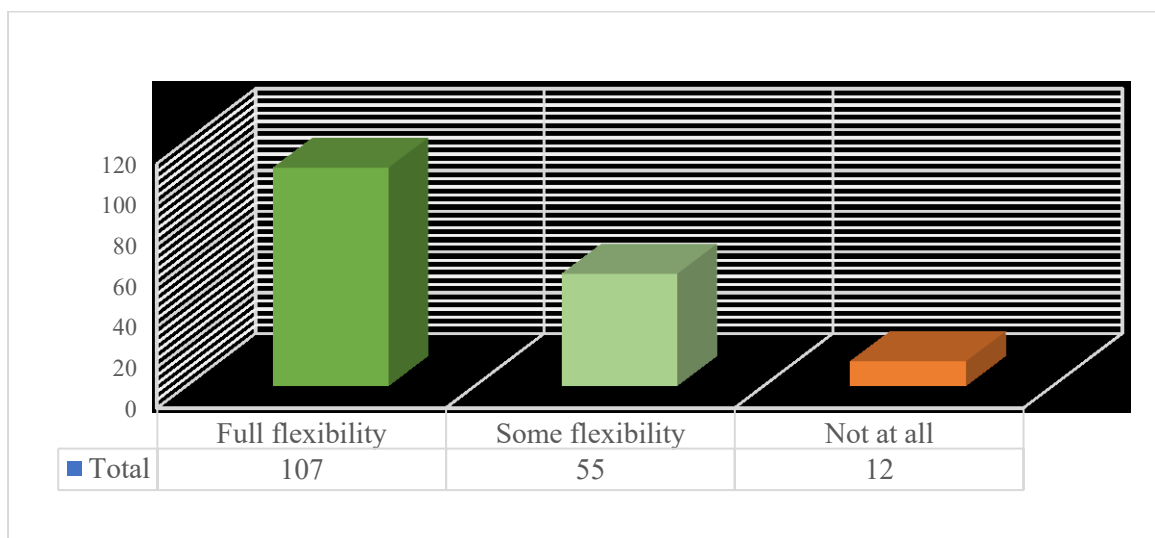
Figure 49: H2M2-1 time management overview (own illustration)

The interferential data analysis results in table 19 are leveraging the Wilcoxon signed rank test for H2M1 are summarized below:

Table 19: H2M1 validation through Wilcoxon signed rank test

ID	Question	Wilcoxon signed rank test with continuity correction	Results
H2M1-1 211 - Celebrate	*During Covid-19 lock-downs (remote work), did your team celebrate success at work?* "Wilcoxon signed rank test with continuity correction 211 - Celebrate data: v_62 V = 4604, p-value = 0.0001236 alternative hypothesis: true location is less than 3"	The test indicated that people's median response (Median = 2..."sometimes") is significantly more positive than the neutral category 3..."not sure" (V = 4604, p <0.001).	YES
H2M1-2 212 - Flexibility	*Did you have flexibility to organize your work time while working from home?* "Wilcoxon signed rank test with continuity correction 212 - Flexibility data: v_40 V = 0, p-value < 2.2e-16 alternative hypothesis: true location is less than 3"	The test indicated that people's median response (Median = 1..."full flexibility") is significantly more positive than the negative category 3..."not at all" (V = 0, p <0.001).	YES

Source: Own illustration

A cross-tabulation analysis (table 20) of the relation between H2M1-1 (Celebrate, SPSS dataset 211) and H1M1-4 (Short-term Wins, SPSS dataset 114) confirmed that sample "celebrations" is related to sample "short-term wins" ($\chi^2 = 29.16$, p = 0.004).

*Table 20: H2M1 - Validation via Crosstab Analysis: 211 – Celebrate * 114 – Short-term wins*

			114 - Short-term Wins				Gesamt
			Yes, all the time	Sometimes	Not sure	No	
211 - Celebrate	Yes, for almost any reason possible	Count	9	25	1	8	43
			20.9%	58.1%	2.3%	18.6%	100.0%
	Sometimes	Count	13	39	12	13	77
			16.9%	50.6%	15.6%	16.9%	100.0%
	Not sure	Count	1	3	3	2	9
			11.1%	33.3%	33.3%	22.2%	100.0%
	We tried but did not go well	Count	3	2	0	6	11
			27.3%	18.2%	0.0%	54.5%	100.0%
	No, we did not try	Count	0	17	3	12	32
			0.0%	53.1%	9.4%	37.5%	100.0%
Total		Count	26	86	19	41	172
		% of 211 - Celebrate	15.1%	50.0%	11.0%	23.8%	100.0%

Source: SPSS export

4.3.2.2   H2M2 – Validation

Managers seemed to have done a tremendous job in supporting their employees during lockdown working remotely (H2M2-1) as the results show 75% positive reactions, versus 8% unsure and 17% not well or at all (figure 50). The results suggest that most of the employees felt that their managers did a good job in supporting them during the lockdown while working remotely. However, it is important to note that there were still a significant number of employees who felt otherwise, so there is room for improvement in remote work support.
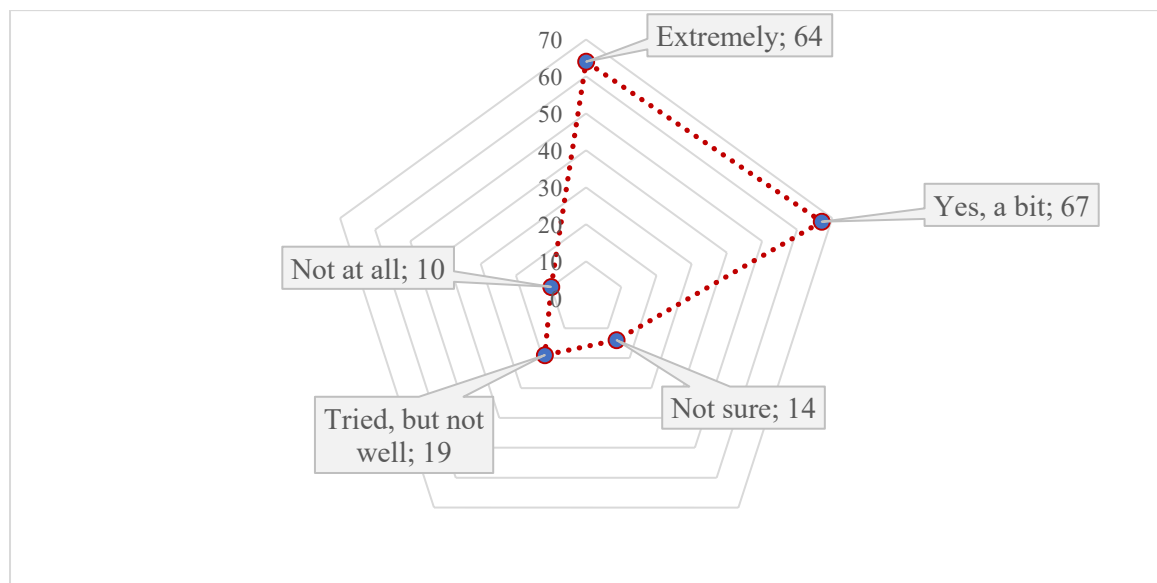
Figure 50: H2M2-1 manager support overview (own illustration)

The data showed no significant differences in perception between male and female respondents regarding the support received from management during the remote work period.

The results also show that 81% of participants across all genders (figure 51) perceived their managers to have a positive view on working from home (H2M2-2).
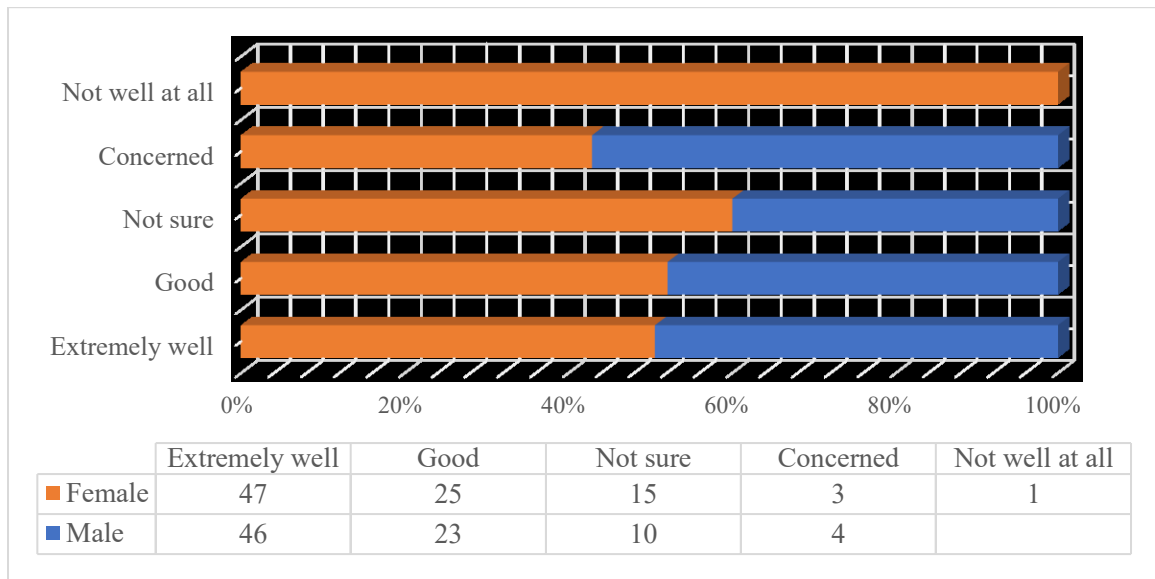
Figure 51: H2M2-2 manager perceiving work from home gender view (own illustration)

	Extremely well	Good	Not sure	Concerned	Not well at all
Female	47	25	15	3	1
Male	46	23	10	4	

The results from this measure showed that a basic majority of respondents, regardless of career stage (H2M2-2) or demographic variables, had a positive perception of their managers' view towards working from home (figure 52).

Many of the responses leaned towards the positive with 81% across all genders.
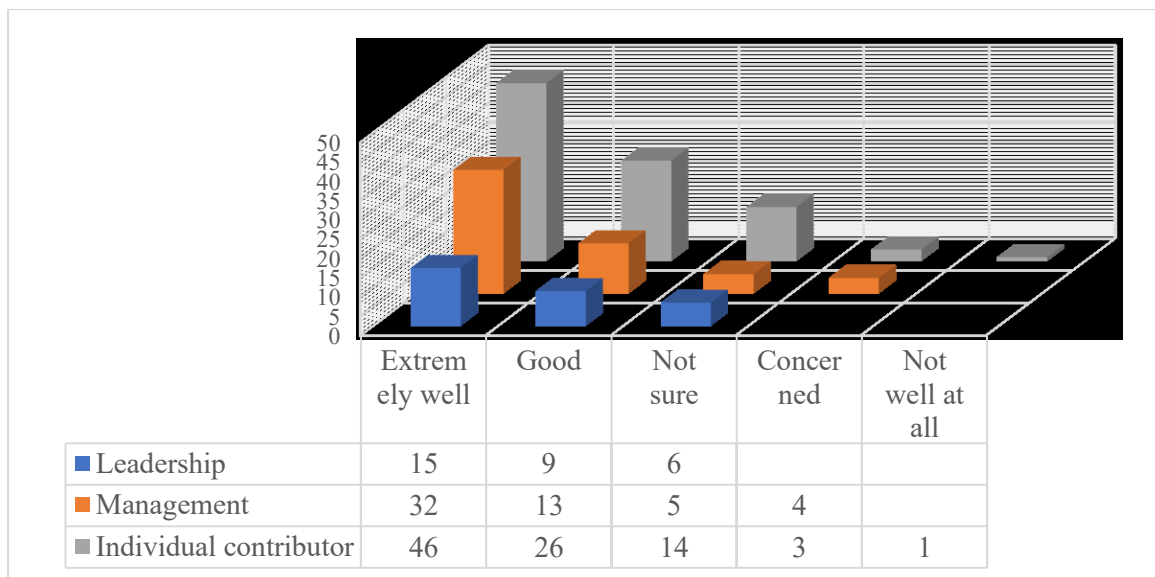
Figure 52: H2M2-2 manager perceiving work from home (own illustration)

	Extremely well	Good	Not sure	Concerned	Not well at all
Leadership	15	9	6		
Management	32	13	5	4	
Individual contributor	46	26	14	3	1

The results through the Wilcoxon signed rank test (table 21) for H2M2 are summarized below:

Table 21: H2M2 validation through Wilcoxon signed rank test

ID	Question	Wilcoxon signed rank test with continuity correction	Results
H2M2-1 221 - Manager Motivation	*Were you motivated by your manager to continue to perform well in your job during the pandemic?* "Wilcoxon signed rank test with continuity correction data: v_63 V = 1999, p-value = 4.746e-15 alternative hypothesis: true location is less than 3"	Test indicated that people's median response (Median = 2..."good") is significantly more positive than the neutral category 3..."not sure" (V = 1999, p <0.001).	YES
H2M2-2 222 - Viable	*How viable did your manager perceive working from home?* "Wilcoxon signed rank test with continuity correction data: v_64 V = 262, p-value < 2.2e-16 alternative hypothesis: true location is less than 3"	Test indicated that people's median response (Median = 1..."extremely") is significantly more positive than the neutral category 3..."not sure" (V = 262, p <0.001).	YES

Source: Own illustration

4.3.2.3 H2M3 – Validation

During the pandemic, the respondents reported back the following (figure 53) about being asked about their development (H2M3-1):

- 26%: attempted to develop themselves but were unsure of how to or declined to answer.
- 55%: engaged in self-paced training.
- 20%: received support from their manager to continue their development.

This data suggests that most of the respondents, around 75% (55% + 20%), took proactive steps towards developing themselves during the pandemic. Out of these, the majority chose self-paced training, while a smaller portion received support from their managers. On the other hand, 26% either did not know how to develop themselves or declined to answer the question. This could indicate a need for resources or guidance in personal development.
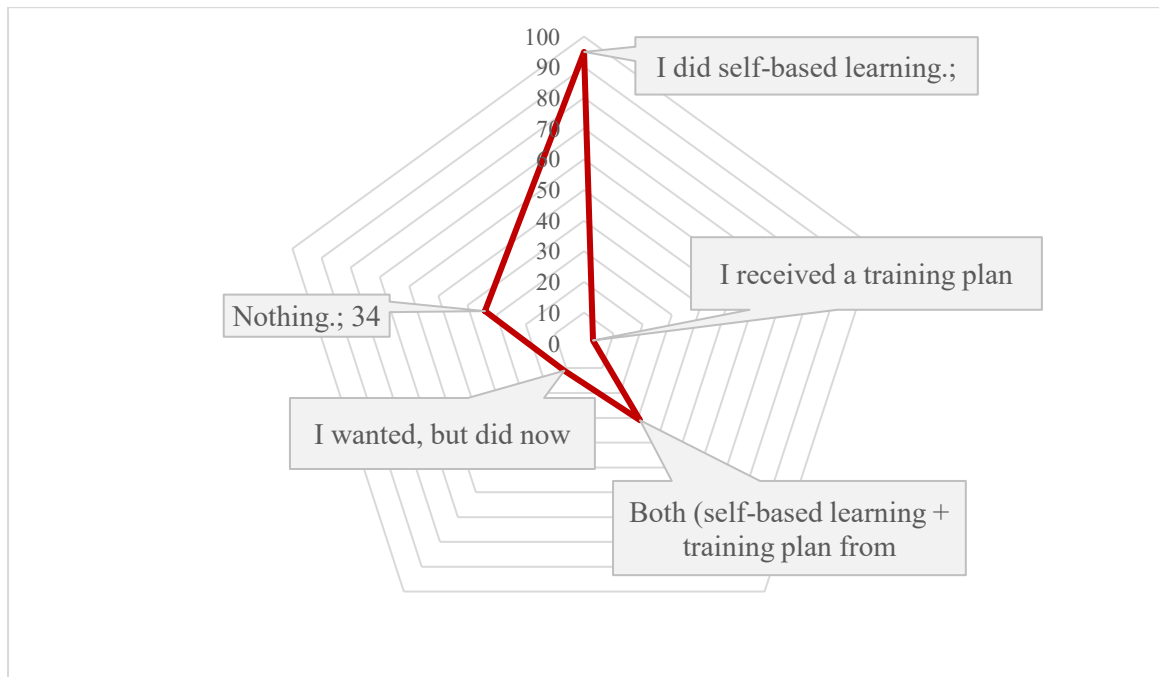
Figure 53: H2M3-1 learning and development overall view (own illustration)

90% of respondents rated H2M3-2 positively, indicating that video conferencing tools improved collaboration (figure 54). It's worth noting that the survey did not differentiate between personal and professional collaboration. This indicates that conferencing tools improved collaboration could be due to several factors, including a level of convenience (video conferencing tools allowed people to communicate and collaborate from anywhere, at any time, making it easier for them to work together regardless of their location). Also, it provided a visual and auditory connection, making communication more personal and allowing for real-time interactions.
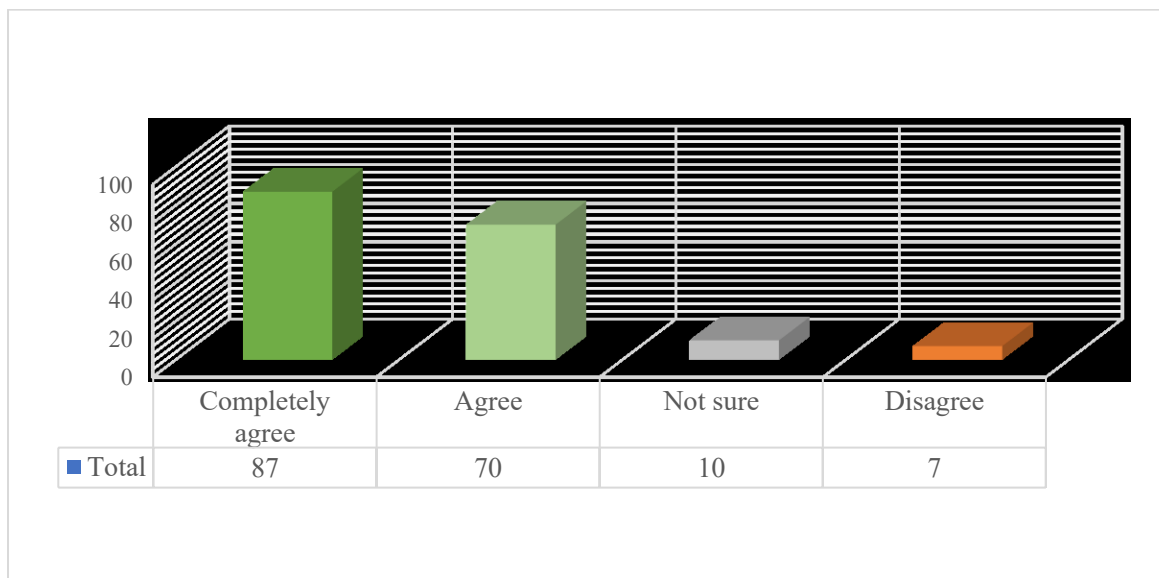
Figure 54: H2M3-2 video conferencing as a collaboration tool (own illustration)

Videoconferencing has been found to be positively received by leadership, individual contributors, and management, with 88% respectively finding it to be beneficial for workplace collaboration highest rated though by management with 94% (figure 55).

	Completely agree	Agree	Not sure	Disagree
■ Leadership	13	13	2	2
■ Management	30	21	2	1
■ Individual contributor	44	36	6	4
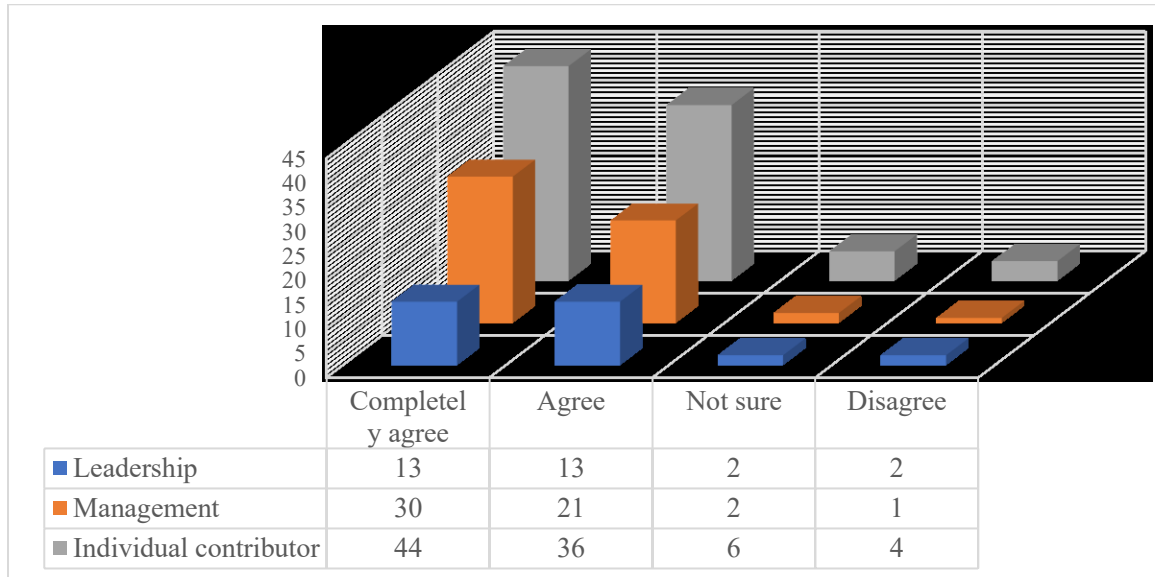
Figure 55: H2M3-1 video conferencing as a collaboration tool by career stage (own illustration)

The interferential analysis results (table 22) for H2M3 were undertaken by a Chi-square test and to get an ordinal scale, the author transformed the answers (both is "highest", self-based second, then the others… only training plan is included in both, because there is "more" support than self-based).

Table 22: H2M3 validation through Chi-square test

		Frequency	Valid percentages
Valid	Both (self-based learning + training plan from manager).	34	19.8
	I did self-based learning.	94	54.7
	I wanted but did now know how.	11	6.4
	Nothing.	33	19.2
	Total	172	100.0

Source: SPSS export

Then the data was also analysed through Wilcoxon signed rank test (table 23):

Table 23: H2M3 validation through Wilcoxon signed rank test

ID	Question	Wilcoxon signed rank test with continuity correction	Results
H2M3-1	*While working from home, did you learn any new skills that helped you accomplish your work better?* "Wilcoxon signed rank test with continuity correction data: v_65new V = 2112, p-value = 9.422e-16 alternative hypothesis: true location is less than 3"	Test indicated that people's median response (Median = 2..."I did self-based learning") is significantly more positive than the first negative category 3..."I wanted but did now know how." (V = 2112, p <0.001).	YES
H2M3-2	*Do you think that videoconferencing platforms (like ZOOM, WebEx, or TEAMS) have improved overall workplace collaboration?* "Wilcoxon signed rank test with continuity correction data: v_66 V = 273, p-value < 2.2e-16 alternative hypothesis: true location is less than 3"	Test indicated that people's median response (Median = 2..."agree") is significantly more positive than the neutral category 3..."not sure" (V = 273, p <0.001).	YES

Source: Own illustration

With the next question on leadership behaviour (H2M4-1) the respondents had the opportunity to select multiple attributes and it resulted in 347 selections (figure 56). The trend was towards the positive characteristics with 68% like appreciation, emphasized, etc. but there was also feedback of 32% on negative behaviour during the initial stages of the pandemic observed at leadership.

	Appreciation	Empathized with my experience	Saw the world from my perspective	Confusion about the situation	Social distance	Did not observe any
■Total	85	108	44	49	47	14

.
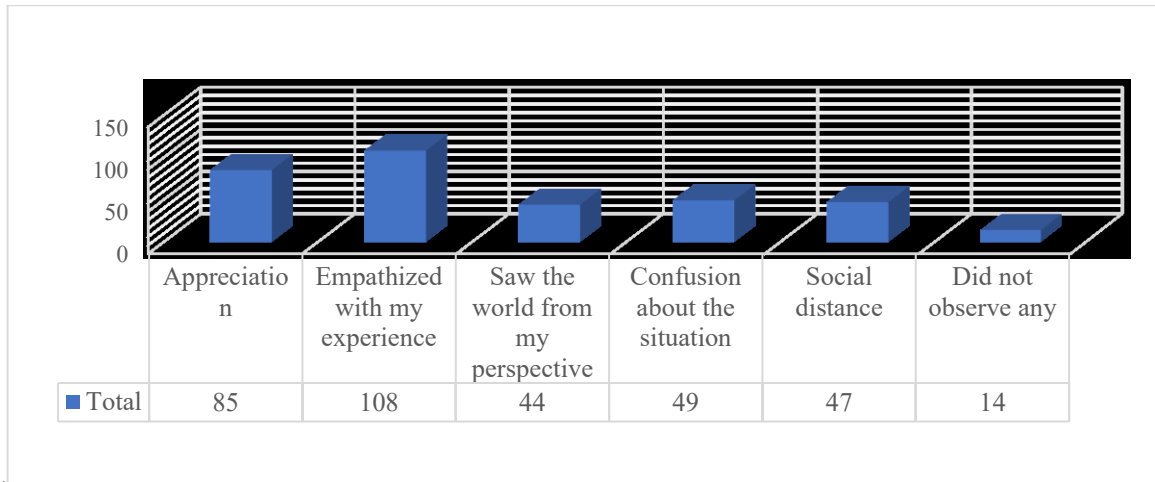
Figure 56: H2M4-1 leadership behaviour overview (own illustration)

For the interferential analysis the author leveraged the Chi-square test (table 24) resulting that the majority of 91.95% respondents did observe behaviours by leadership, indicated is this proportion significant ($\chi^2 = 122.51$, p <0.001). At most, the behaviour "Empathized with my experience" was observed ($\chi^2 = 9.20$, p = 0.002). No other behaviours were displayed significantly more often than they were not.

Table 24: H2M4 validation through Chi-square test

	yes %	
Appreciation	48.85	X-squared = 0.091954, df = 1, p-value = 0.7617
Empathized with my experience	61.49	X-squared = 9.1954, df = 1, p-value = 0.002426
Saw the world from my perspective	25.29	X-squared = 42.506, df = 1, p-value = 7.047e-11
Confusion about the situation	27.59	X-squared = 34.966, df = 1, p-value = 3.356e-09
Social distance	26.44	X-squared = 38.644, df = 1, p-value = 5.087e-10
Did not observe any	8.05	X-squared = 122.51, df = 1, p-value < 2.2e-16
→ did observe some.	91.95	X-squared = 122.51, df = 1, p-value < 2.2e-16

Source: SPSS export

4.3.3 Validation H3

The next table 25 gives a view of the validation of the first research question

Table 25: Overview of 3ʳᵈ research question and its hypothesis

Research question 3	Are organizations adequately equipped and structured to deal with challenges of the future?
Hypothesis H3	The transformation to the home-office is inevitable.

Source: Own illustration

Following measurements test hypothesis H3 (figure 57):
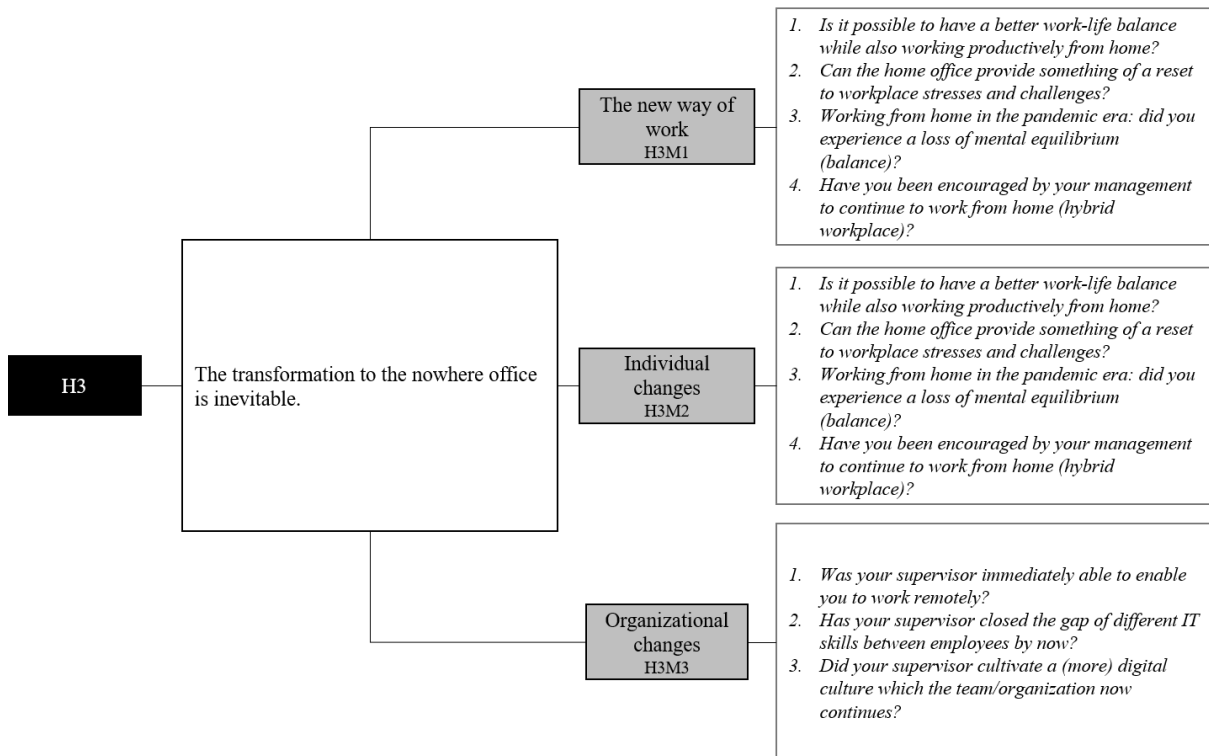
Figure 57: H3 measures and scoring setup (own illustration)

4.3.3.1 H3M1 – Validation

82% agreed to the question if they can have a better work-life balance while also working productively from home versus 11% disagreeing with this concept (figure 58).

There is no big difference across genders 81% females and 83% of males agree to the better work life-balance and same as across the continents (figure 59) there is a general approval of a better work-life balance while working from home.
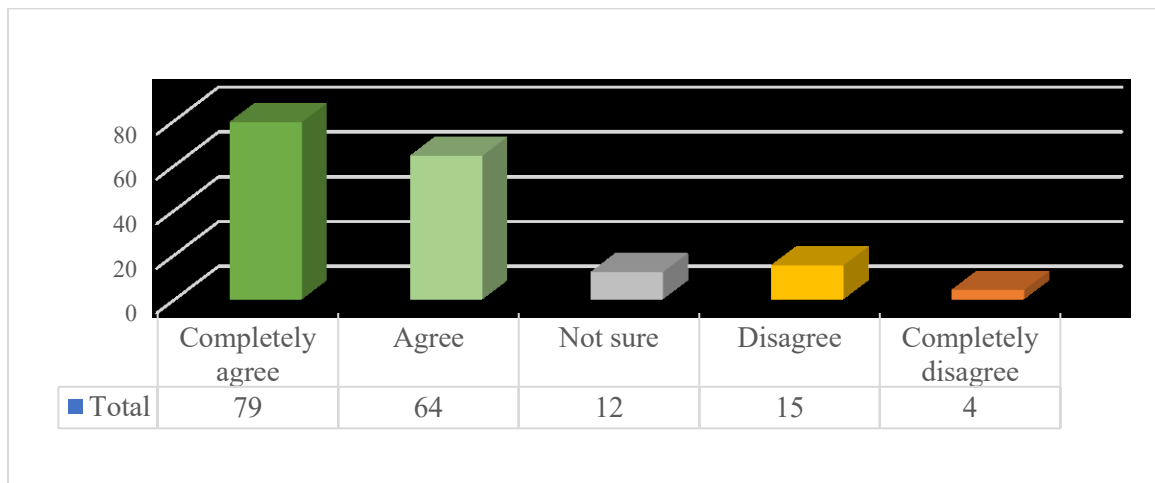
Figure 58: H3M1-1 overall view (own illustration)

	Completely agree	Agree	Not sure	Disagree	Completely disagree
■ Total	79	64	12	15	4
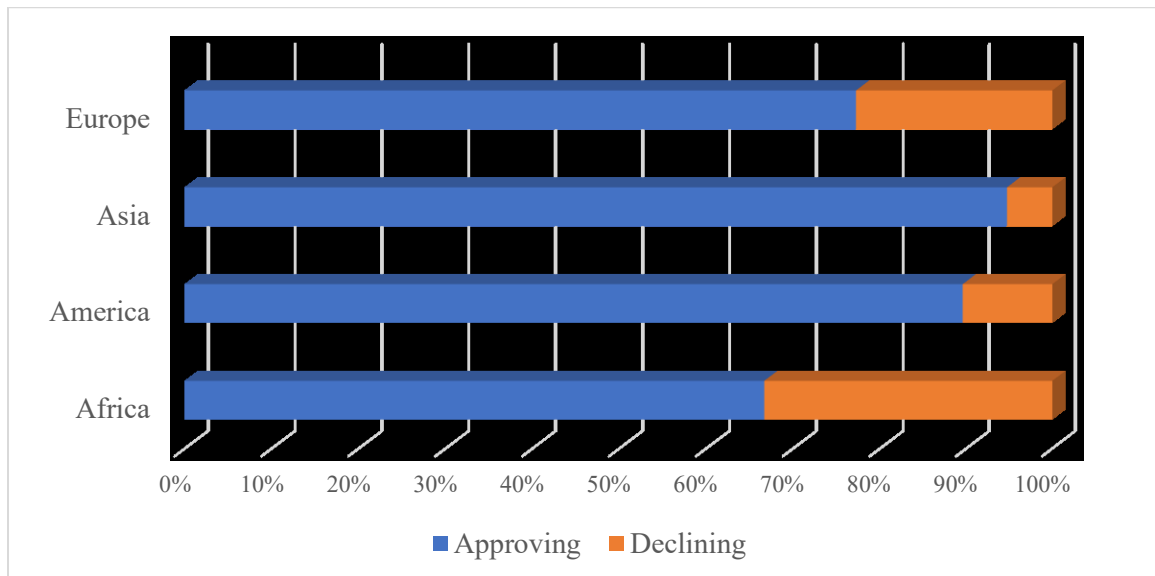
Figure 59: H3M1-1 work-life balance view across continent (own illustration)

In the overall view (figure 60) there is no significant trend towards complete agreement, in regards of the home-office can reset stress (H3M1-2). This result reflects the opinions of the respondents regarding the stress-resetting ability of a home office. The 67% positive response suggests that many respondents believe that a home office can effectively reset stress. However, the 21% uncertainty and 12% disagreement indicate that there are also individuals who are not convinced or have conflicting opinions on this topic.
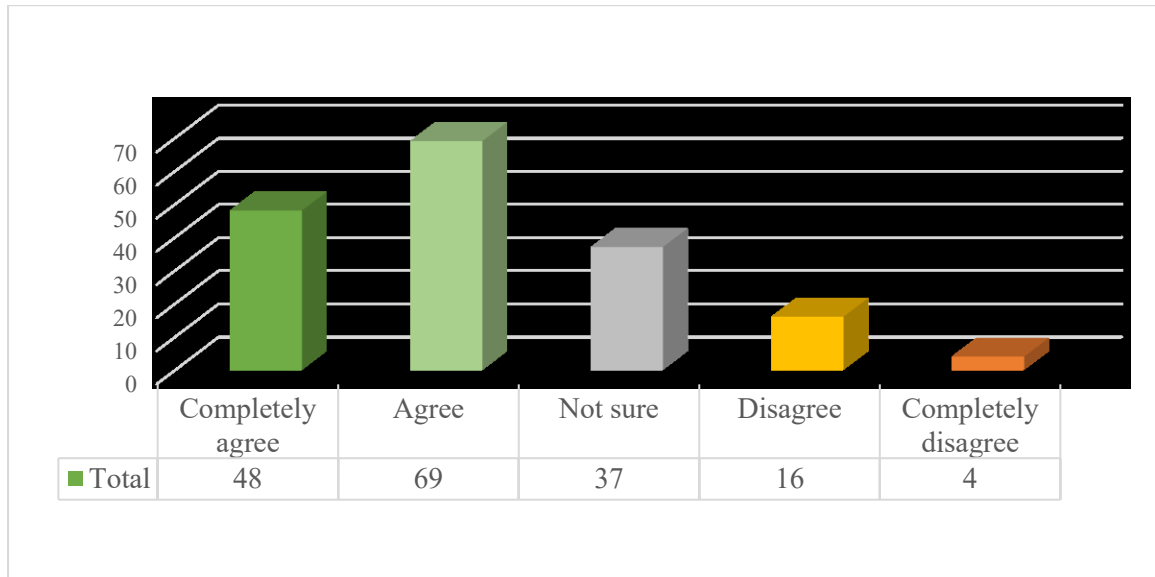
Figure 60: H3M1-2 overall view (own illustration)

The information provided suggests that the 12% negative response to the stress-resetting ability of a home office is driven by individuals in the roles of "individual contributors" and "management" (figure 61). This may indicate that these specific career stages have different experiences or perspectives on the topic compared to other career stages not mentioned.
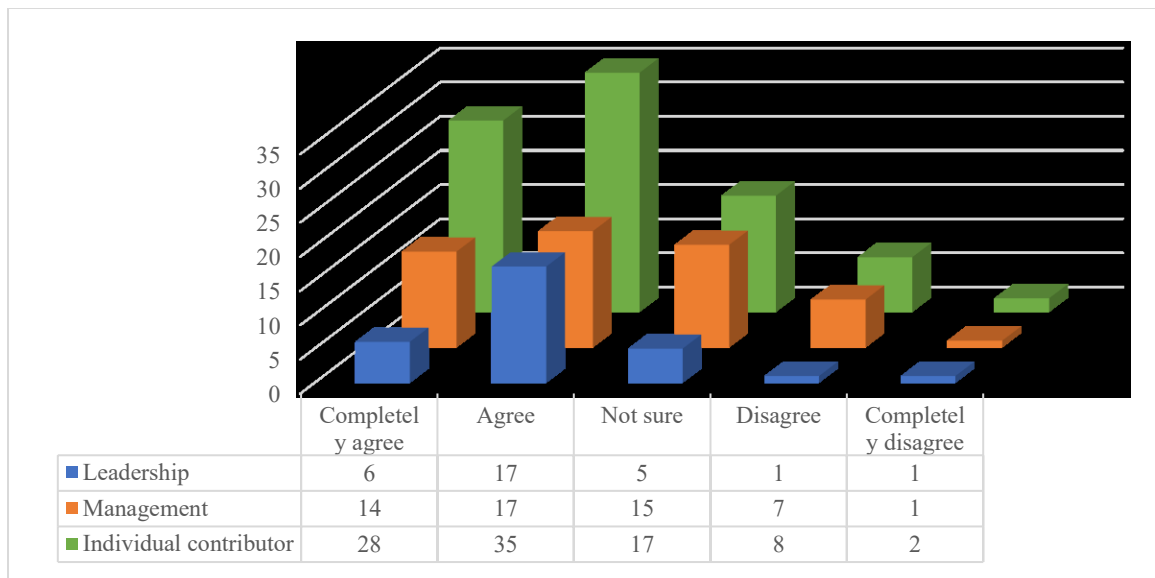
Figure 61: H3M1-2 home office stress reduction indicator by career level (own illustration)

The loss of mental equilibrium when starting to work from home caused a diverse response (H3M1-3), as only 55% of the data returned stated to have "lost" it versus the ones disagreeing with this statement at 34% (figure 62), however including the ones not sure to

the negative poll it would rise to 45% which cannot be unconsidered in this analysis and therefore drives this measurement towards being neutral.

	Completely agree	Agree	Not sure	Disagree	Completely disagree
■ Total	26	69	19	36	24
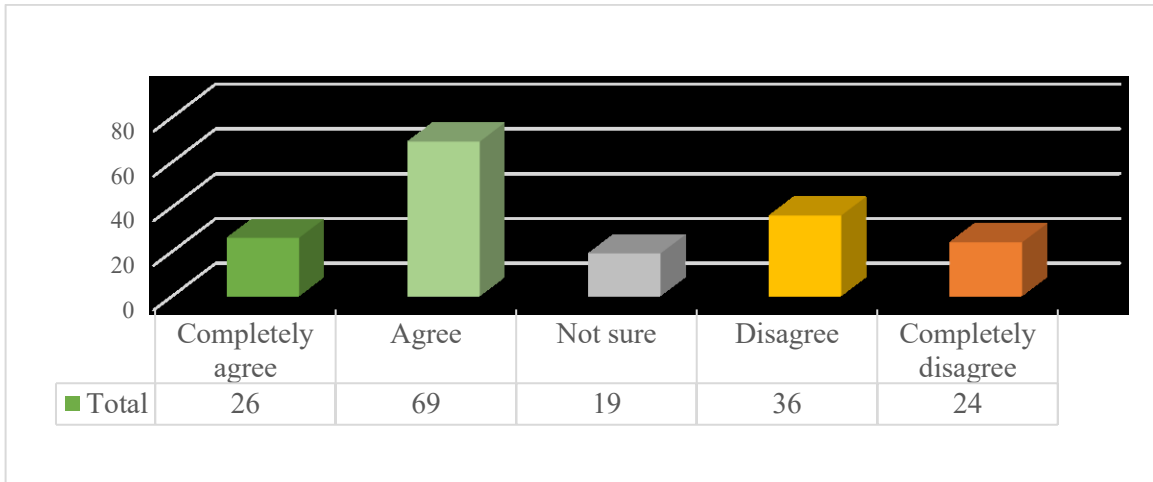
Figure 62: H3M1-3 mental equilibrium overview (own illustration)

When adding the gender perspective there is a plus of 10% on the female feedback supporting the fact of a loss of mental equilibrium than with men (figure 63), in regards of disagreeing both are almost equal.

This disparity between men and women (figure 63) could be due to various factors such as differences in work-life balance expectations, social and cultural norms, caregiving responsibilities, and unequal distribution of household chores. Women tend to have more responsibilities in managing their households and children, which can increase their workload and stress levels when working from home. Research has also shown that women are more likely to experience burnout and mental health issues when working remotely. It is crucial to address these gender-based challenges to ensure that both men and women can thrive while working from home.

	Completely agree	Agree	Not sure	Disagree	Completely disagree
■ Female	13	41	8	17	12
■ Male	13	28	11	19	12
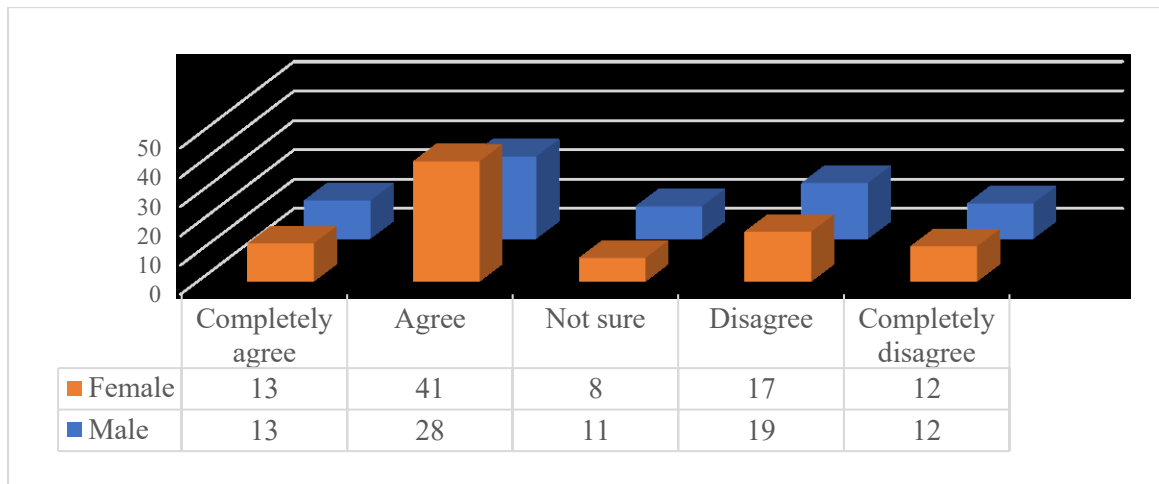
Figure 63: H3M1-3 mental equilibrium versus gender view (own illustration)

Looking ahead the trend is that many respondents will continue working from a hybrid office approach (H3M1-4), meaning they will spend a certain number of days in the office or at any other place e.g., home. Then there will be about 11% being asked to return to their workplace, compared to 26% who can work going forward fully from home, or elsewhere (figure 64). The percentage of employees being asked to return to their workplace may be influenced by the type of work they do, the company's policies and priorities, and the current health and safety considerations. The 26% who can work fully from home or elsewhere may have roles that allow for remote work or may have made arrangements with their employer to work from home on a full-time basis.

	I am asked to go back to the office.	I am offered a hybrid work solution.	I can work 100% from home now.
■ Total	19	109	46
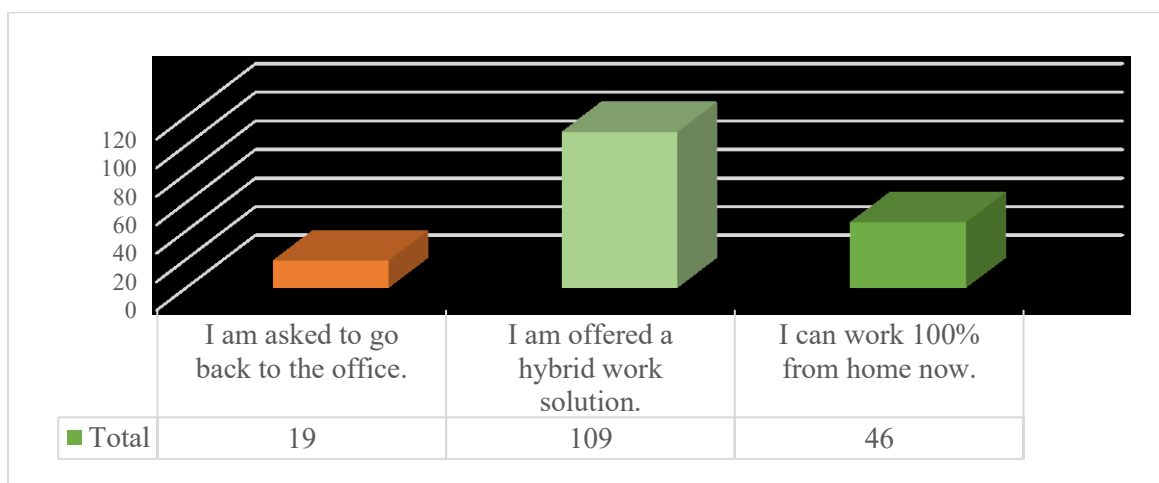
Figure 64: H3M1-5 work from home view (own illustration)

Investigating the company background of the respondents, the majority can either work from anywhere or has a hybrid approach in place (figure 65) with 64% in a hybrid scenario and 30% transforming into 100% home-office.

	I am asked to go back to the office.	I am offered a hybrid work solution.	I can work 100% from home now.
■ Academic institution	9	24	1
■ Multinational organization	10	77	40
■ Non-governmental organization (NGO)		6	1
■ Self employed		2	4
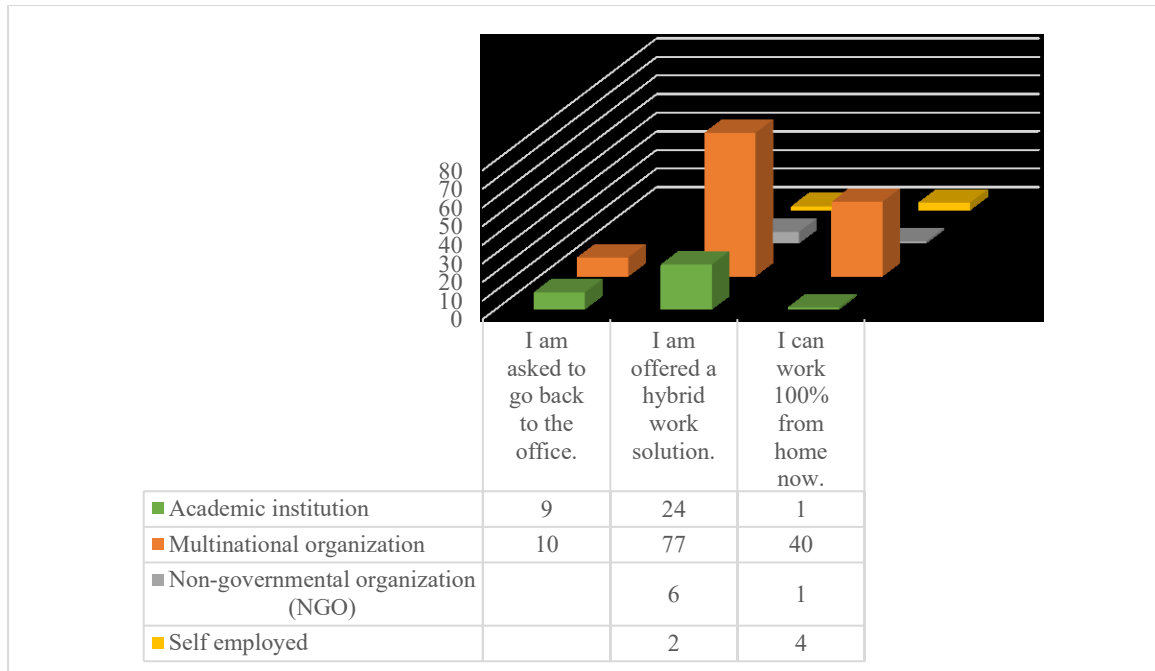
Figure 65: H3M1-5 work from home analysis company view (own illustration)

The interferential data analysis results in table 26 are leveraging the Wilcoxon signed rank test for H3M1:

Table 26: H3M1 validation through Wilcoxon signed rank test

ID	Question	Wilcoxon signed rank test with continuity correction	Results
H3M1-1	*Is it possible to have a better work-life balance while also working productively from home?* "Wilcoxon signed rank test with continuity correction data: v_67 V = 1082, p-value < 2.2e-16 alternative hypothesis: true location is less than 3"	The test indicated that people's median response (Median = 2..."agree") is significantly more positive than the neutral category 3..."not sure" (V = 1082, p <0.001).	YES
H3M1-2	*Can the home office provide something of a reset to workplace stresses and challenges?* "Wilcoxon signed rank test with continuity correction data: v_68 V = 1122, p-value = 7.783e-16 alternative hypothesis: true location is less than 3"	The test indicated that people's median response (Median = 2..."agree") is significantly more positive than the neutral category 3..."not sure" (V = 1122, p <0.001).	YES
H3M1-3	*Working from home in the pandemic era: did you experience a loss of mental equilibrium (balance)?* "Wilcoxon signed rank test with continuity correction data: v_69 V = 4956, p-value = 0.03772 alternative hypothesis: true location is less than 3"	The test indicated that people's median response (Median = 2..."agree") is significantly more negative [towards a loss of equilibrium] than the neutral category 3..."not sure" (V = 4956, p = 0.038).	YES
H3M1-4	*Have you been encouraged by your management to continue to work from home (hybrid workplace)?* "Wilcoxon signed rank test with continuity correction data: v_31 V = 12090, p-value < 2.2e-16 alternative hypothesis: true location is greater than 1"	The test indicated that people's median response (Median = 2..."I am offered a hybrid work solution.") is significantly more positive than the negative category 1..."I am asked to go back to the office." (V = 12090, p <0.001).	YES

Source: Own illustration

4.3.3.2 H3M2 - Validation

When asked about the impacts when the participants started to work from home during the first Covid-19 lockdown (H3M2-1), multiple opportunities to select attributes were available and resulted in 324 selections (figure 66). The trend is that people's home changed (58% out of 174) when moving work to home, 48% raised that meeting increased, 32% had to deal with health issues and 12% provided feedback that nothing changed for them.
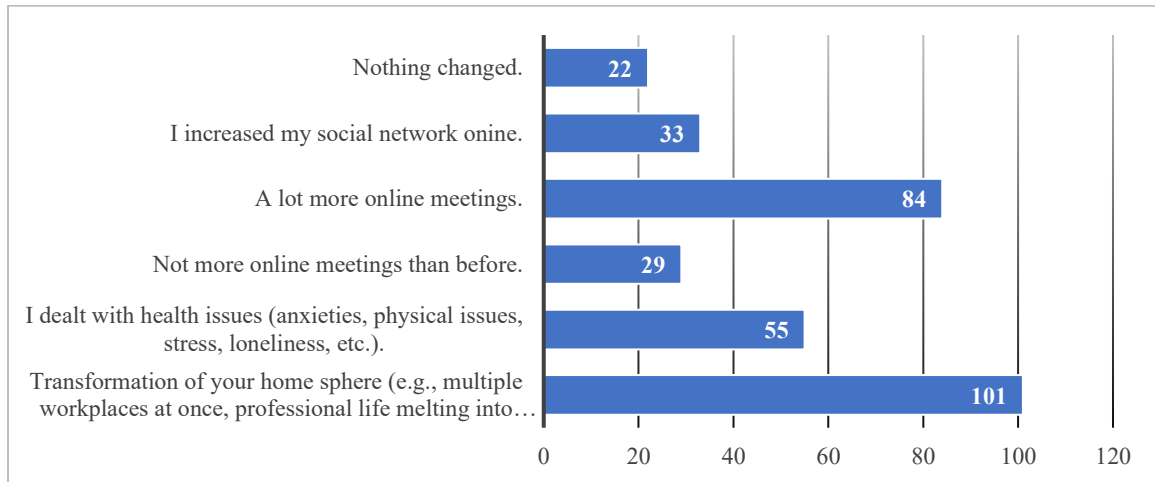
Figure 66: H3M2-1 overall view (own illustration)

As the question of this measurement H3M2-1 allowed for multiple responses the author also performed Chi-square test across all the available answers (table 27).

Table 27: H3M2-1 validation through Chi-square test

	yes %	
Transformation of your home sphere (e.g., multiple workplaces at once, professional life melting into personal, etc.).	56.9	X-squared = 3.3103, df = 1, p-value = 0.06885
I dealt with health issues (anxieties, physical issues, stress, loneliness, etc.).	31.03	X-squared = 25.034, df = 1, p-value = 5.631e-07
Not more online meetings than before.	16.09	X-squared = 80.023, df = 1, p-value < 2.2e-16
A lot more online meetings.	48.27	X-squared = 0.2069, df = 1, p-value = 0.6492
I increased my social network online.	17.24	X-squared = 74.69, df = 1, p-value < 2.2e-16
Nothing changed.	12.64	X-squared = 97.126, df = 1, p-value < 2.2e-16
-> something changed.	87.36	X-squared = 97.126, df = 1, p-value < 2.2e-16

Source: Own illustration

87.36% of respondents reported observing individual changes, and a Chi-square test revealed this proportion to be significant ($\chi^2 = 97.13$, p < 0.001). At most, a "transformation of your home sphere" happened, though, the proportion of mentions was not significant ($\chi^2 = 3.31$, p = 0.069). No other changes were perceived significantly.

A further step was taking the responses to question H3M2-1 "Can home office provide a reset to workplace stresses and challenges?" and then compared with previous responses to H3M1-2 "Can the home office provide something of a reset to workplace stresses and challenges?" and H3M1-3 "Working from home in the pandemic era: did you experience a loss of mental equilibrium (balance)?" in order to check if the respondents confirmed previous statements or not (table 28).

Table 28: H3M2-1 validation through Chi-square: H3M1-2 + M3H1-3

There is no link between Transformation of home sphere and workplace stress. ($\chi^2 = 2.73$, p = 0.603)
There is no link between not more online meetings and workplace stress. ($\chi^2 = 5.34$, p = 0.254)
There is no link between not more online meetings and loss of mental equilibrium. ($\chi^2 = 8.85$, p = 0.065)
There is no link between a lot more online meetings and workplace stress. ($\chi^2 = 1.20$, p = 0.879)
There is no link between a lot more online meetings and loss of mental equilibrium. ($\chi^2 = 6.75$, p = 0.149)
There is no link between increased social network and workplace stress. ($\chi^2 = 0.35$, p = 0.986)
There is no link between increased social network and loss of mental equilibrium. ($\chi^2 = 3.25$, p = 0.517)

Source: Own illustration

However, no link was found between these answers and previous ones.

An additional cross-tabulation analysis (table 29) confirmed the perception that a "transformation of the home sphere" is related to a loss of mental equilibrium, as indicated by a significant Chi-square test ($\chi^2 = 15.65$, p = 0.004).

Table 29: H3M2 validation through crosstab analysis:
Transformation Home Sphere vs 311 – Mental Equilibrium

			313 - Mental equilibrium					Total
			Completely agree	Agree	Not sure	Disagree	Completely disagree	
Transformation of your home sphere (e.g., multiple workplaces at once, professional life melting into personal, etc.).	not quoted	Count	9	18	11	20	15	73
			34.6%	26.9%	57.9%	55.6%	62.5%	42.4%
	quoted	Count	17	49	8	16	9	99
			65.4%	73.1%	42.1%	44.4%	37.5%	57.6%
Total		Count	26	67	19	36	24	172
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPSS export

Then, also confirmed are health issues to be related to a perception of workplace stress (table 30), as indicated by a significant Chi-square test ($\chi^2 = 9.97$, p = 0.041).

Table 30: H3M2 validation through crosstab analysis: Health Issues vs 312 – Workplace Stress

			312 - Workplace stress					Total
			Completely agree	Agree	Not sure	Disagree	Completely disagree	
I dealt with health issues (anxieties, physical issues, stress, loneliness, etc.).	not quoted	Count	36	52	21	9	1	119
			75.0%	76.5%	56.8%	56.3%	25.0%	68.8%
	quoted	Count	12	16	16	7	3	54
			25.0%	23.5%	43.2%	43.8%	75.0%	31.2%
Total		Count	48	68	37	16	4	173
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPSS export

The results also established a relation between health issues to a loss of mental equilibrium (table 31), as indicated by a significant Chi-square test (χ^2 = 53.30, p < 0.001).

Table 31: H3M2 validation through crosstab analysis: Health issues vs 313 Mental Equilibrium

			313 - Mental equilibrium					Total
			Completely agree	Agree	Not sure	Disagree	Completely disagree	
I dealt with health issues (anxieties, physical issues, stress, loneliness, etc.).	not quoted	Count	6	38	18	32	24	118
			23.1%	56.7%	94.7%	88.9%	100.0%	68.6%
	quoted	Count	20	29	1	4	0	54
			76.9%	43.3%	5.3%	11.1%	0.0%	31.4%
Total		Count	26	67	19	36	24	172
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPSS export

The answer to the second question of this measurement (H3M2-2), if the participant would continue to work from home – most responses (63%) will continue in a hybrid work arrangement with a huge spike in multinational organizations (72%) and 32% continuing working from home (figure 67).

	100% from home now	Hybrid approach	No	Not sure
■ Academic institution		23	8	3
■ Multinational organization	35	79	10	3
■ Non-governmental organization (NGO)	1	6		
■ Self employed	3	2		1
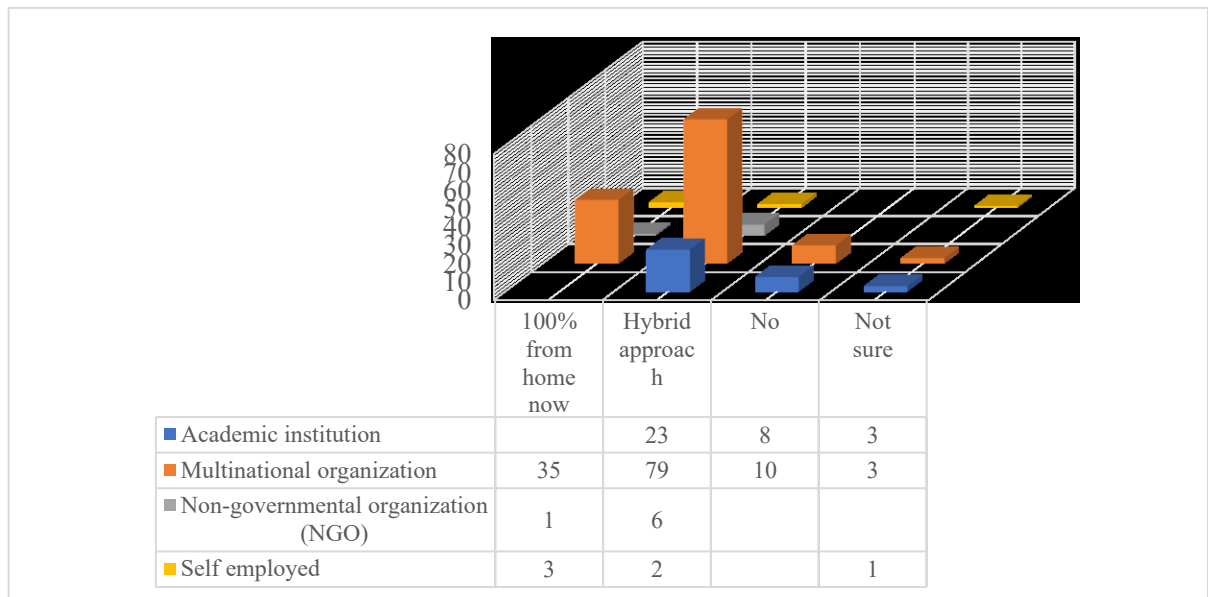
Figure 67: H3M2 work from home by organization (own illustration)

The descriptive results are also confirmed by the cross-tabulation analysis (table 32), where it confirms that those offered to work from home will continue working from home ($\chi^2 = 172.41$, p <0.001).

Table 32: H3M2 validation through crosstab analysis: Continue WFH vs 314 Hybrid workplace

			314 - Hybrid workplace			Total
			I am asked to go back to the office.	I am offered a hybrid work solution.	I can work 100% from home now.	
232 - Continue WFH	No	Count	14	2	0	16
			87.5%	12.5%	0.0%	100.0%
	Not sure	Count	2	2	3	7
			28.6%	28.6%	42.9%	100.0%
	Hybrid approach	Count	1	93	16	110
			0.9%	84.5%	14.5%	100.0%
	100% from home now	Count	0	12	27	39
			0.0%	30.8%	69.2%	100.0%
Total		Count	17	109	46	172
			9.9%	63.4%	26.7%	100.0%

Source: SPSS export

It suggests that there is a strong association between being offered the option to work from home and continuing to work from home. This indicates that the results are statistically significant and not likely due to chance.

From a gender perspective 64% of women stated to be working from home vs 36% male of a total of 39. Hybrid approach of a total sample of 110 states 46% female starting to use this work approach versus 54% male respondents (figure 68).
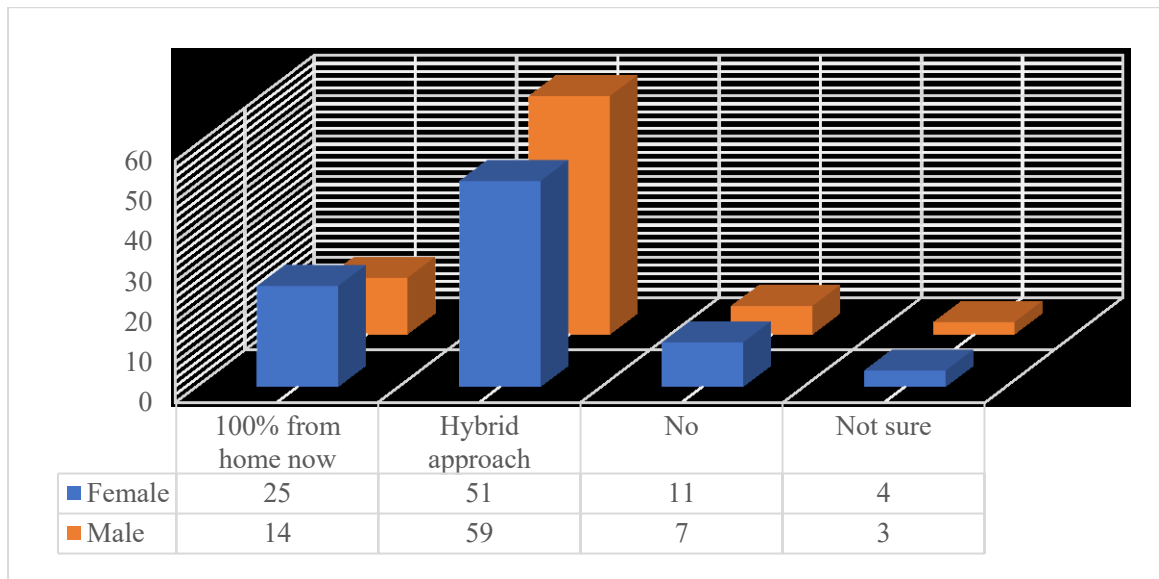
Figure 68: H3M2 work from home by gender (own illustration)

Additionally, a cross-tabulation analysis (table 33) was performed to evaluate the view on flexibility, and it can be confirmed that those offered to work from home perceive more flexibility than those who have to go back to the office (χ^2 = 25.56, p <0.001), therefore suggests that there is a strong association between being offered the option to work from home and perceiving more flexibility.

Table 33: H3M2 validation through crosstab analysis: Flexibility vs 314 Hybrid workplace

			314 - Hybrid workplace			Total
			I am asked to go back to the office.	I am offered a hybrid work solution.	I can work 100% from home now.	
212 - Flexibility	Full flexibility	Count	3	76	28	107
			2.8%	71.0%	26.2%	100.0%
	Some flexibility	Count	9	29	16	54
			16.7%	53.7%	29.6%	100.0%
	Not at all	Count	5	4	2	11
			45.5%	36.4%	18.2%	100.0%
Total		Count	17	109	46	172
			9.9%	63.4%	26.7%	100.0%

Source: SPSS export

122

Another inferential analysis approach for H3M2 was through the Wilcoxon signed-rank test (table 34) to compare two related samples: those who believe that a hybrid work schedule (partially working from home and partially working in the office) is acceptable and those who desire to work 100% from home, for question H3M2-2.

- Hybrid AND 100% home: A one-sample Wilcoxon signed-rank test indicated that the median response (Median = 3, "hybrid approach") is significantly more favourable towards working from home than the neutral category 2 ("not sure"), as represented by the calculated test statistic (V = 12773) and corresponding p-value (<0.001). Result = Yes

- 100% from home is desired: A one-sample Wilcoxon signed-rank test indicated that the median response (Median = 3, "hybrid approach") is not significantly different from completely working from home (category 4, "100% from home now"), as represented by the calculated test statistic (V = 916.5) and corresponding p-value (p = 0.747). Result = No.

As this analysis provides two outcomes, the author will consider the option of working 100% from home as the most significant change based on the results of the inferential analysis, which is contrary to the findings of the descriptive analysis.

Table 34: H3M2 validation through Chi-square and Wilcoxon signed-rank test

ID	Question	Results	Results
H3M2-1	What happened when you started to work from home during the first Covid-19 lockdown?	The majority of 87.36% did observe individual changes; a Chi-square test indicated this proportion significant ($\chi^2 = 97.13$, p <0.001).	YES
H3M2-2	Will you continue working from home?	A one-sample Wilcoxon signed-rank test indicated that people's median response (Median = 3..."hybrid approach") is not significantly more towards completely working from home (which is category 4..."100% from home now") (V = 916.5, p = 0.747).	NO

Source: Own illustration

4.3.3.3   H3M3 – Validation

91% out of 174 participants were immediately able to pursue their work from home (H3M3-1). No notable differences between the gender: 86 females versus 5 and 72 males versus 11 were immediately able to pick up work from a home office.

Overall, 59% agreed to the question about their manage being able to bridge the gap of different IT skills (H3M2-2), versus 14% denying it and 27% not being sure (figure 69).

	Yes	Not sure	No
■ Leadership	19	7	4
■ Management	38	11	5
■ Individual contributor	45	29	16
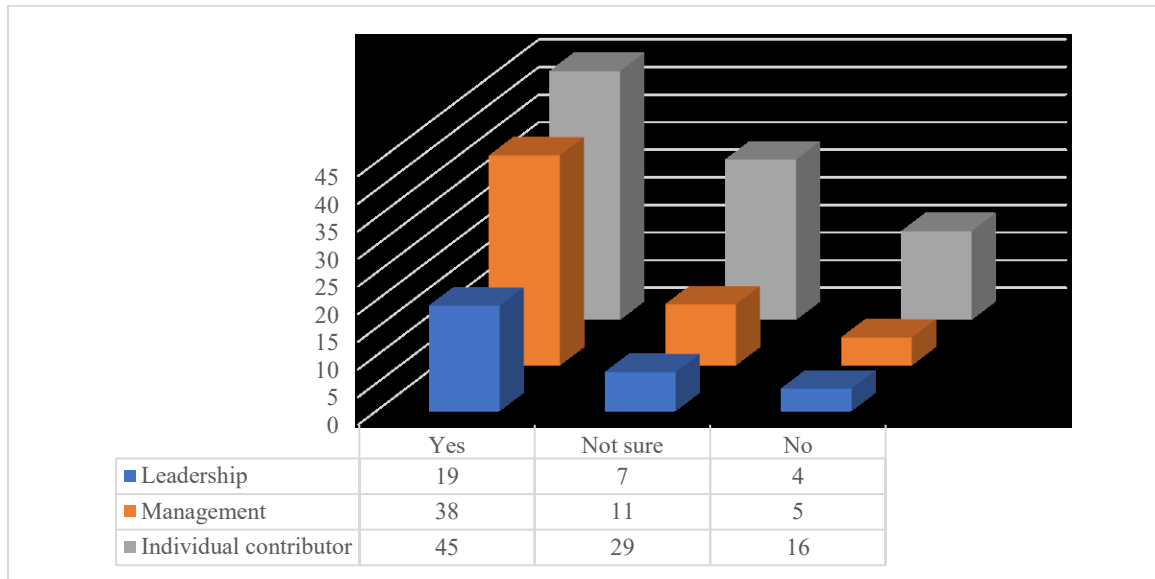
Figure 69: H3M3-2 closing the gap by the leadership career stage view (own illustration)

A clear 69% agreeing with the question on cultivation of a digital culture (H3M3-3), also with 18% not sure and a small 13% for declining this statement (figure 70).

	Yes	Not sure	No
■ Female	69	13	9
■ Male	51	18	14
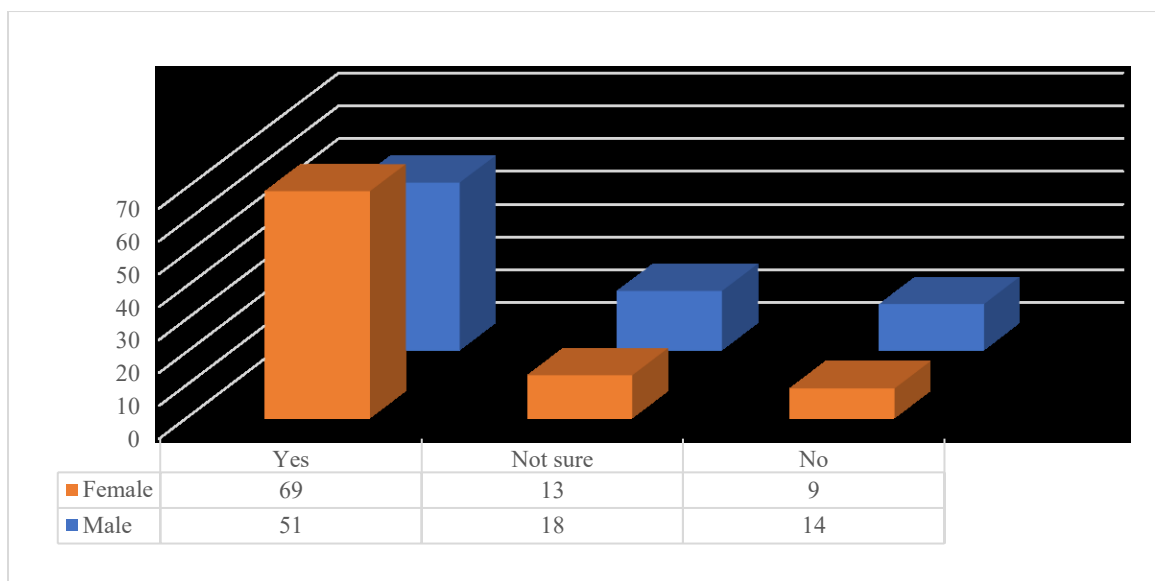
Figure 70: H3M3-3 digital culture gender view (own illustration)

The interferential data analysis results (table 35) for H3M3 through Chi-Square and Wilcoxon rank test provided following results:

Table 35: H3M3 validation through Chi-square and Wilcoxon signed-rank test

ID	Question	Results	Results
H3M3-1	*Was your supervisor immediately able to enable you to work remotely?* X-squared = 117.23, df = 1, p-value < 2.2e-16	Chi-square test suggests that there is a strong association between being immediately enabled to work remotely and the majority of 91.3%. The high chi-squared value (117.23) and the low p-value (less than 0.001) indicate that the results are statistically significant and not likely due to chance. This means that majority of 91.3% of the employees were immediately enabled to work remotely which is a significant proportion.	YES
H3M3-2	*Has your supervisor closed the gap of different IT skills between employees by now?* data: v_38 V = 1524, p-value = 1.861e-12 alternative hypothesis: true location is less than 2	A one-sample Wilcoxon signed-rank test indicated that people's median response (Median = 1..."yes") is significantly more positive than the neutral category 2..."not sure" (V = 1524, p <0.001).	YES
H3M3-3	*Did your supervisor cultivate a (more) digital culture which the team/organization now continues?* data: v_39 V = 1470, p-value < 2.2e-16 alternative hypothesis: true location is less than 2	A one-sample Wilcoxon signed-rank test indicated that people's median response (Median = 1..."yes") is significantly more positive than the neutral category 2..."not sure" (V = 1470, p <0.001).	YES

Source: Own illustration

A cross-tabulation analysis (table 36) compared samples of H3M3-1 (Enable WFH) versus H1M2-3 (Provide process) was able to confirm that those who were provided with processes are more enabled to work from home ($\chi^2 = 44.08$, p <0.001).

*Table 36: H3M3 validation through crosstab analysis: 331 - Enable WFH * 123 - Provide Processes*

			123 - Provide Processes					Total
			Completely	Yes, to a certain point	Not sure	Not effectively	No	
331 - Enable WFH	Yes	Count	78	66	2	9	2	157
			49.7%	42.0%	1.3%	5.7%	1.3%	100.0%
	No	Count	1	5	0	5	4	15
			6.7%	33.3%	0.0%	33.3%	26.7%	100.0%
Total		Count	79	71	2	14	6	172
			45.9%	41.3%	1.2%	8.1%	3.5%	100.0%

Source: SPSS export

Result: It can be confirmed that those who were provided with processes are more enabled to work from home ($\chi^2 = 44.08$, p <0.001).

The other analysis examined the relation between work from home and manager support (table 37) and it can be confirmed that those who had managers that were motivated are more enabled to work from home ($\chi^2 = 24.42$, p <0.001).

*Table 37: H3M3 validation through crosstab analysis: 331 - Enable WFH * 221 - Manager Motivation*

			221 - Manager Motivation					Total
			Extremely	Yes, a bit	Not sure	Tried, but not well	Not at all	
331 - Enable WFH	Yes	Count	64	63	10	12	8	157
			40.8%	40.1%	6.4%	7.6%	5.1%	100.0%
	No	Count	0	4	4	5	2	15
			0.0%	26.7%	26.7%	33.3%	13.3%	100.0%
Total		Count	64	67	14	17	10	172
			37.2%	39.0%	8.1%	9.9%	5.8%	100.0%

Source: SPSS export

5 RESULTS AND NEW SCIENTIFIC STATEMENTS

Subsequent to the empirical investigation, the succeeding chapter entails the presentation of the findings, which are then elucidated and contextualized in relation to the hypotheses of the quantitative inquiry.

5.1 Hypothesis H1

Research question 1

> *How can organizations foster relationships and nurture their employee's mental health while also planning for an uncertain future and drive growth?*

The research question for this thesis is focused on understanding how organizations can foster relationships and nurture their employees' mental health while also planning for an uncertain future and driving growth.

Hypothesis H1

> *A change management approach requires two perspectives, an organizational perspective (how groups can be managed through a change) and an individual perspective (how people experience change), which require parallel focuses during the process to sustain both workforce health and successful business transformation.*

Outcome   The first research question and its hypothesis has been confirmed.

5.1.1 H1 result summary

The survey results suggest that a change management approach that considers both organizational and individual perspectives is crucial for successful change within an organization. To support this 73% of the 174 respondents agreed or completely agreed that an organizational culture is necessary when change is taking place, this importance is driven mostly by individual contributors (68%) and even management (81%). This indicates that the individual perspective supported though organizational culture has a significant impact on a change process. Interesting to see this is slightly more driven by women (41%) than men (32%) to see a need for an organizational culture when change is taking place.

Organizational culture and effective communication were therefore found to be supportive during change, aligning with the ideologies of Kotter and the ADKAR model.

Respondents were diverse in their experiences with previous change processes, with some indicating a lack of knowledge of supportive actions from top-down e.g., through change-champs or mitigation plans. Although 51% had no or did not know about support through change-champs (Wilcoxon p=0.954), the awareness of short-term wins through communication was at 65%.

Then involvement in the decision-making process is mainly reserved towards leadership (97%) as the data shows which identifies an organizational perspective, other career stages are involved as well as the data shows, but from the difference between being engaged or not leadership is certainly standing out. This is also supported through the cross-tabulation analysis which showed that people being involved are significantly more aware of resistance mitigation plans than others ($\chi^2 = 6.14$, p = 0.047).

There is also a clear indicator about communication in early stages which comes from top-down (Kotter, 1996), the supportive response rate was 85% - again an indicator of the two perspectives as mentioned in hypothesis H1.

Last the hypothesis was confirmed by the indicator of the last measure of this indicating that there must be two change processes and perspectives when it comes to change as 86% responded supportive when being asked about relevant support to work from home during the first lockdown.

5.1.2 H1 concluding new scientific statement #1

These results suggest that both organizational and individual perspectives should be considered and addressed in parallel during a change process and therefore lead to a new scientific statement:

> *Successful remote work during a pandemic showed that management needs to drive a clear and consistent communication strategy to build trust and engagement, drive transparency, and mitigate resistance to change. Organizations must plan to reach all employees using various channels and methods.*

It is difficult to make a generalization about what all managers think regarding their employees coming to work. Historically, managers may have assumed that their employees come to work into a physical office (Suzman, 2020), as this was traditionally the norm. But with the rise of remote work (Choudhury, 2020; Grzegorczyk et al., 2021; Hobsbawm, 2022;

Seabrook, 2021) and the transformation towards a more flexible work environment, managers have to adapt their assumptions and expectations about where and when their employees are working. Managers have had to adapt and learn to manage their teams effectively in a remote environment, which require different communication and management styles than through a traditional office setting. Additionally, managers need to consider factors such as time zone differences and technology infrastructure when managing remote teams. Overall, the shift towards remote work has presented new challenges, but also offers the potential for cost savings, increased productivity, and employee satisfaction, if approached thoughtfully and strategically.

The role of communication and transparency throughout the change process (Barrett, 2002; Elving, 2005) helps to reduce uncertainty and anxiety among employees. This includes communicating the reasons for the change, the benefits it brings, and the plans for implementing it. Clear and consistent communication is required to build trust and engagement among employees, it hast to drive transparency and can build a positive organizational culture and can therefore then also help to mitigate resistance to change.

In the context of the recent pandemic, organizations need to plan also for the use of different communication channels and methods to reach all employees, especially those who may be working remotely, experiencing disruptions to their usual routines or have not the required knowledge to handle new technologies.

Effective communication during a pandemic requires the use of digital communication tools, such as videoconferencing and online collaboration platforms, to stay connected with employees and ensure that they are informed and engaged throughout the change process.

It is important to remember that communication should not only be top-down, but also bottom-up. A feedback mechanism must be in place, to allow employees to provide their input and concerns, as well as to show that their opinion matters. Last, communicating which measures being taken to ensure the safety and well-being of employees during the pandemic, and to provide support and resources for employees who may be experiencing stress or other challenges because of the pandemic.

Especially in a pandemic, it is important to be flexible and to use different communication methods to reach all employees and address their concerns.

5.2 Hypothesis H2

Research question 2:

> *How much flexibility in workforce management does leadership have during transitioning through uncertain times?*

This research question aimed to investigate to what extent leadership can manage their workforce flexibly during periods of uncertainty and transition and the second hypothesis aimed in regards of change management at the middle segments of both the 8 steps model and ADKAR: empowerment and knowledge.

Hypothesis H2

> *People and teams must be supported by management with empathy and optimism, which will foster focus on what can be controlled as opposed to being consumed by chaos.*

Outcome   The second research question and its hypothesis has been confirmed.

5.2.1   H2 result summary

The data analysed for this hypothesis shows that respondents were engaged, mostly supported, in a way developed, and treated with empathy during the lockdowns.

69% of respondents reported that During the Covid-19 lockdowns their team celebrated successes remotely, with the age group born in the 1970s being the most likely to engage in such celebrations. 18% of respondents reported not engaging in remote celebrations.

Respondents also reported positively on organizing their time during lockdown, 62% of respondents reported that they had flexibility to organize their work time while working from home during the lock-down.

A cross-tabulation analysis was able to confirm the assumption of a relation between celebrating success and communication of short-term wins ($\chi^2 = 29.16$, p = 0.004).

The measurements also verified that management did support their teams during lockdown, most respondents (75%) reported feeling positively motivated by their manager to continue performing well in their job while working remotely. 81% of the respondents reported that their manager had a positive perception of working from home. There were no significant differences in perception of support through management based on gender or other

demographic variables. Interestingly 17% reported not positive about being motivated by their manager.

In terms of personal and professional development while working from home, 55% of the respondents reported engaging in self-paced training to develop new skills that helped them accomplish their work better. 20% of respondents reported receiving support from their manager for skill development, while 26% either did not know how to or did not attempt to develop new skills.

Almost all respondents (90%) rated video conferencing tools positively for improving collaboration, however with no differentiation made between personal or professional collaboration. The perception of improvement in collaboration was balanced across career stages, with 86% of leadership, 88% of individual contributors, and 94% of management finding it positive.

Last, during the initial stages of the change process brought on by the Covid-19 pandemic, 68% of the respondents observed positive behaviours such as appreciation and emphasis from leadership. However, 32% also reported observing negative behaviours from leadership during this time.

Above examples all indicate that Kotter's 5th step in his model (1996) which is called empowerment can certainly be leveraged in a scenario of a pandemic and therefore confirm the hypothesis H2.

5.2.2   H2 concluding new scientific statement #2

Management must be aware of remote employee burnout and isolation and take steps to prevent it, such as holding virtual meetings, promoting colleague connection, and providing resources and support for remote work.

Management requires to be aware of the potential for isolation and burnout among remote employees and take steps to prevent or mitigate these issues. This can include encouraging regular virtual team meetings, providing opportunities for remote employees to connect with their colleagues, and providing the necessary resources and support for employees to work effectively from home. It must be recognized that when employees work remotely, they can feel isolated and disconnected from their colleagues (especially when working across different time-zones), leading to a decrease in motivation and job satisfaction. Regular virtual team meetings can help mitigate this issue by providing a space for remote workers

to connect with their team, share their thoughts and experiences, and feel more connected to the company culture. Additionally, providing opportunities for remote employees to interact and build relationships with their colleagues can also help to prevent feelings of isolation. This could include virtual happy hours, coffee breaks, or other social events.

Moreover, it's important to ensure that remote employees have access to the necessary resources and support to work effectively from home, such as the right technology and tools, access to training and development opportunities, and clear communication channels with their managers and colleagues. This can help reduce stress and burnout and enable remote workers to be productive and engaged.

5.2.3   H2 concluding new scientific statement #3

Organizations need to be aware of legal, compliance and data security issues related to remote work and ensure that they are following all relevant laws and regulations (internal and external).

All this transformation towards a remote workforce requires a strong governance and data privacy policies to ensure that employee data is handled responsibly and in compliance with relevant laws and regulations. This includes not only protecting employee's personal data but also ensuring that data is used in an ethical and fair manner. Organizations must address legal and data security issues related to remote work to ensure compliance with all relevant laws and regulation. Management must be mindful of the potential legal and data security risks associated with remote work and take necessary steps to ensure compliance with all relevant laws and regulations. This includes internal policies as well as external regulations related to data privacy, security, and protection. It is important for organizations to assess the risks associated with remote work and put in place appropriate measures to secure sensitive data, such as using secure virtual private networks (VPNs), two-factor authentication, and encrypted communication.

Such risks can include data privacy breaches where remote workers may access sensitive company data from unsecured or personal devices, increasing the risk of data breaches. Cybersecurity threats, where remote workers may be more susceptible to phishing attacks and other forms of cybercrime. Or when remote work becomes more difficult to ensure compliance with data protection laws and regulations, such as GDPR and HIPAA (aka non-compliance with regulations). Then loss of control over data as with remote work, it may be harder for organizations to monitor and control the access and usage of company data. Last

unauthorized access bearing the risk of remote workers sharing login credentials or leave their devices unattended, increasing the risk of unauthorized access to sensitive data.

5.2.4   H2 concluding new scientific statement #4

Empathy and optimism from management is crucial in successfully transitioning to remote work during the pandemic. Management should lead by example and actively participate in the change process to ensure it is embraced by the organization.

This thesis investigated as well on management support throughout the pandemic which led to the above conclusion that it is essential for management to approach change with much empathy and optimism, as helps employees feel supported and understood during the process and uncertainty. Empathy allows management to understand the perspective and feelings of employees and address their concerns, while optimism helps to keep everyone focused on the positive aspects of the change and the benefits it brings. This statement relates to the first statement, as clear and consistent communication can help employees feel informed and included in the decision-making process and can also help manage expectations and alleviate anxiety.

Empathy is also closely connected with active listening; therefore, management is advised to encouraging open communication and actively listening to the concerns and suggestions of employees can help build trust and foster a more positive work environment. It also includes being open to new ideas and approaches and allowing employees to work in a way that suits them best can help increase engagement and productivity. Demonstrating the desired behaviours and attitudes (through management) can set the tone for the rest of the team and help drive a positive transition.

5.3 Hypothesis H3

Research question 3

Are organizations adequately equipped and structured to deal with challenges of the future?

Hypothesis H3

The transformation to the home-office is inevitable.

There will be a transition to a nowhere office, building on change (Kotter, 1996) and reinforcing it (Hiatt, 2006). Respondents are mostly encouraged to have a hybrid work scenario going forward, also in the transition time managers were able to establish a work from home scenario for their employees and have been driving a new culture in that regard. However, the personal mental equilibrium may have taken its tolls during the pandemic, resulting in one measure returning as neutral whereas the next clearly indicating a

Outcome   The third research question and its hypothesis has been confirmed.

5.3.1 H3 result summary

The results for this hypothesis suggest that most respondents agreed that they can have a better work-life balance while also working productively from home. 82% of respondents agree that it is possible to have a better work-life balance while also working productively from home, with only 11% disagreeing.

This sentiment is consistent across genders and across continents. Respondents generally also approved of a better work-life balance while working from home and in addition responded positively about the reset of stress through a home office. 67% responded positively about the reset of stress through a home office and 12% disagree, 21% of the respondents have no clear answer.

More than half responded that they experienced a loss of their mental equilibrium when starting to work from home. 55% of the respondents stated that they lost their mental equilibrium when starting to work from home and 34% disagreed with this statement. However, when including the ones not sure, it rises to 45%, which cannot be unconsidered in this analysis and therefore drives this measurement towards being neutral.

There is a plus of 10% on the female feedback supporting the fact of a loss of mental equilibrium than with men, which can be an indicator of personal and professional workload in one space.

Looking ahead many respondents will continue working from a hybrid office approach, meaning they will spend a certain number of days in the office or at any other place e.g., home. 67% will continue working in a hybrid office approach, meaning they will spend a certain number of days in the office or at any other place such as home.

When asked about the impacts when the participants started to work from home during the first Covid-19 lockdown, 87.36% of respondents reported observing individual changes.

The trend is that people's home changed (58% out of 174) when moving work to home, 48% raised that meeting increased, 32% had to deal with health issues and 12% provided feedback that nothing changed for them. A cross-tabulation analysis confirmed these statements as the perception of a "transformation of the home sphere" is related to a loss of mental equilibrium, health issues are related to a perception of workplace stress and health issues are related to a loss of mental equilibrium.

The transformation to the nowhere i.e., home office is also unstoppable as 63% of the respondents confirmed to continue in a hybrid work arrangement, driven by women 64% versus men 36%.

This move towards home or hybrid office certainly drove organizational changes, but 91% out of 174 participants were immediately able to pursue their work from home.

59% approved that their manager was able to bridge the gap of different IT skills and 69% agreed that there was cultivation of a digital culture, which can indicate a culture change and correlates back to the first hypothesis.

5.3.2 H3 concluding new scientific statement #5

It needs further use of virtual reality, artificial intelligence, or other immersive technologies to create a sense of presence and connection among team members working remotely.

Remote working will continue to be a part of the future of work. It has become more prevalent in recent years due to advances in technology that have made it easier for people to communicate and collaborate remotely. The COVID-19 pandemic has accelerated this trend as many companies have had to rapidly shift to remote work to keep their employees safe and maintain business continuity. The transition to the remote / nowhere / home office

needs to involve the development of new methods and technologies that enable more effective and efficient communication and collaboration among remote team members even within different time-zones.

The development of sophisticated and partially automated project management tools that allow remote teams to stay organized and on track will be supportive of this new continuous movement.

It will also have to also include the use of advanced analytics and data visualization techniques to identify key drivers of employee engagement and motivation, or the use of machine learning algorithms to predict how different groups of employees are likely to respond to specific changes.

5.3.3 H3 concluding new scientific statement #6

Organizations must find and define a suitable balance between remote and in-person work, with hybrid models becoming more common and still providing space for people to return to the physical office.

Many companies have found that remote work can be just as productive as working in an office and has benefits such as cost savings, better work-life balance, and the ability to hire and retain top talent from a wider geographic area. Many employees have also found that they prefer the flexibility and autonomy that comes with remote work.

However, it is important to raise that remote working may not be suitable for all types of jobs or for all employees. Some employees prefer the social interaction and structure of an office environment, and some jobs may require a more hands-on approach that is difficult to replicate remotely.

6 CONCLUSION

The rise of remote work has presented new challenges for managers and organizations in terms of managing and engaging employees. However, by understanding and addressing the different perspectives of change - organizational, individual, and cultural - managers can create more effective and efficient strategies for managing remote teams.

As a result of evaluating hypothesis 1 the data disclosed that clear and consistent communication, transparency, and an overall change management plan are key to reducing uncertainty, building trust and engagement among employees, and mitigating resistance to change. Additionally, through investigating hypothesis 2 the use of advanced analytics and technology can support managers in understanding and managing employee engagement and motivation.

It is difficult to state if all organizations are adequately equipped and structured to deal with the challenges of the future, as it depends on the specific organization and industry. Many organizations have been forced to adapt to remote work due to the COVID-19 pandemic and have had to quickly implement new technologies and processes to support a remote workforce. Measuring productivity of remote employees will become an interesting topic for future research.

In my opinion, the rise of remote work is here to stay, and leaders, managers or organizations must continue to adapt and evolve to meet the needs of a changing workforce. This will require a focus on creating a culture of trust, transparency, and open communication, as well as investing in the right technologies and processes to support remote teams. Ultimately, the successful management of remote teams will be a critical factor in the long-term success of organizations in the years to come.

As the world becomes more digitized, organizations focus more on cybersecurity and data privacy to protect their and customer assets, but also ensure data is remotely secure with their employees. It will require for organizations to stay even more up to date with the latest technologies and trends to be able to adapt to potential threats.

In my view, the increasing importance of cybersecurity and data privacy is a crucial aspect of remote work that should not be overlooked. As more and more data is transmitted and stored remotely, it becomes increasingly vulnerable to cyber threats such as hacking and data breaches. Organizations must take proactive measures to protect both their own assets and

those of their customers, and this will require staying up to date with the latest technologies and trends in cybersecurity.

Furthermore, as remote work becomes more prevalent as the results for hypothesis 3 displayed. Therefore, it is essential for organizations to ensure that their employees are aware of and compliant with cybersecurity policies and procedures. This includes providing training and resources to employees to help them identify potential security risks and take appropriate action to mitigate them. By prioritizing cybersecurity and data privacy, organizations can create a secure and reliable remote work environment that benefits both employees and customers alike.

As the future of work will continue to be shaped by augmented technologies and data analytics, there is a risk that certain jobs may become automated, leading to potential job displacement or redundancy. It will be interesting to see how organizations consider supporting their employees through this transition and to have plans in place to upskill and reskill their workforce to adapt to the changing nature of work and how much this requires an on-site attendance versus a remote one.

From own personal experience, I believe that organizations must be aware of the risk of job displacement or redundancy through increased influence of augmented technologies and need to take proactive steps to support their employees through this transition. This includes not only having plans in place to up- and/or reskill their workforce but also to provide opportunities for professional development and growth. I think it will also be interesting to see how organizations approach this challenge and whether they opt back for on-site attendance or nurture remote work for their employees. While remote work can offer increased flexibility and productivity, there may be certain jobs that require an on-site presence. Balancing the benefits and drawbacks of each approach will be crucial for organizations as they navigate this transition.

Ultimately, I believe that organizations that prioritize the well-being and development of their employees will be the most successful in adapting to the changing nature of work. By investing in employee training and development and providing opportunities for career growth, organizations can not only support their employees but also ensure their long-term success in a rapidly changing work environment.

The trend towards the "nowhere office" or remote work is very much going to continue, and organizations will need to ensure they have the right technology, processes, and culture in place to support this shift. In my opinion, it is important to recognize that remote work is not a one-size-fits-all solution and to find the right balance between remote and on-site work is crucial for both the employer and employee.

Organizations will need to offer a flexible work environment that allows employees to make choices that work best for them. While businesses will need to ensure their competitiveness maintains, they will find part of their workforce in remote locations and an important aspect is not only to consider the technical improvement, but also to provide employees with the necessary resources and support to maintain their mental and physical well-being while working remotely.

In my opinion by prioritizing employee well-being, organizations can create a positive and supportive remote work environment that benefits both employees and the organization, which then results in a more engaged and productive workforce that contributes to the long-term success of the organization. Following actionable behaviour should be fostered:

- Foster a culture of trust, transparency, and open communication: Leaders should prioritize creating a culture of trust and open communication within their remote teams. This can be achieved through regular check-ins, team-building activities, and creating spaces for open dialogue.

- Invest in the right technologies and processes: To support remote teams, leaders and organizations should invest in the right technologies and processes. This includes collaboration tools, project management software, and other resources that enable remote teams to work effectively and efficiently.

- Provide training and support for remote work: Leaders should provide training and support for their employees to help them adapt to remote work. This can include training on best practices for remote communication and collaboration, as well as technical support for remote technologies.

- Emphasize work-life balance: Remote work can blur the lines between work and personal life, so leaders should emphasize the importance of work-life balance for their remote teams. This can include setting clear expectations around work hours, encouraging breaks and time off, and providing resources for mental health and wellness.

- Focus on results, not just hours worked: Remote work allows for more flexibility in terms of when and where work gets done, so leaders should focus on results rather

than just hours worked. This can include setting clear goals and metrics for remote teams, and evaluating performance based on outcomes rather than time spent working.

If the recommended actions mentioned in the narrative are not taken, several negative consequences can occur: Without a focus on building trust and open communication, remote teams may feel isolated, disconnected, and unsupported. This can lead to misunderstandings, lack of collaboration, and decreased productivity. Devoid of investing in the right technologies and processes, remote teams may struggle to collaborate effectively and complete tasks efficiently. This can result in missed deadlines, increased errors, and decreased quality of work. With no training and support, remote workers may struggle to adapt to remote work and may feel overwhelmed and stressed. This can lead to decreased job satisfaction, increased turnover, and decreased morale. Lacking focus on work-life balance, remote workers may struggle to separate work from personal life, resulting in burnout, decreased productivity, and decreased engagement. Without a focus on results, remote workers may feel that their work is not being evaluated fairly, leading to decreased motivation and decreased commitment to the organization.

Concluding, I like to state that, the future of work through a remote or hybrid approach continues to grow in popularity and becomes a more permanent fixture in the workplace. Therefore, it is likely to be shaped by a combination of technology, data analytics, and organizational strategy and by addressing different perspectives of change from both an organizational and especially individual perspective. Businesses will need to be agile and adaptive to stay competitive and to meet the changing needs and expectations of their employees. The crucial aspect of their prosperous future however lies within a healthy organizational culture, engaged employees and an agile flexibility to adapt to internal (the organization and employees) and external (customer, partner, suppliers, etc.) stakeholder requirements. There is also a need for further research to explore the impact of the nowhere office on employee well-being, productivity, and organizational outcomes.

7 REFERENCES

Abbas, J. (2021). Crisis management, transnational healthcare challenges and opportunities: the intersection of COVID-19 pandemic and global mental health. *Research in Globalization*, *3*. https://doi.org/https://doi.org/10.1016/j.resglo.2021.100037

Ainscow, M. (2007). Taking an inclusive turn. *Journal of research in special educational needs*, *7*(1), 3-7. https://doi.org/https://doi.org/10.1111/j.1471-3802.2007.00075.x

Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological science in the public interest*, *16*(2), 40-68. https://doi.org/https://doi.org/10.1177/15291006155932

Alversia, Y. (2011). Doing quantitative research in education with SPSS. In: Taylor & Francis.

Amankwah-Amoah, J., Khan, Z., & Wood, G. (2021). COVID-19 and business failures: The paradoxes of experience, scale, and scope for theory and practice. *European Management Journal*, *39*(2), 179-184. https://doi.org/https://doi.org/10.1016/j.emj.2020.09.002

Antia, R., Regoes, R. R., Koella, J. C., & Bergstrom, C. T. (2003). The role of evolution in the emergence of infectious diseases. *Nature*, *426*(6967), 658-661. https://doi.org/https://doi.org/10.1038/nature02104

Babbie, E. R. (2020). *The practice of social research*. Cengage learning.

Bai, C., Dallasega, P., Orzes, G., & Sarkis, J. (2020). Industry 4.0 technologies assessment: A sustainability perspective. *International journal of production economics*, *229*. https://doi.org/https://doi.org/10.1016/j.ijpe.2020.107776

Balluck, J., Asturi, E., & Brockman, V. (2020). Use of the ADKAR® and CLARC® change models to navigate staffing model changes during the COVID-19 pandemic. *Nurse leader*, *18*(6), 539-546. https://doi.org/https://doi.org/10.1016/j.mnl.2020.08.006

Barrett, D. J. (2002). Change communication: using strategic employee communication to facilitate major change. *Corporate Communications: An International Journal*. https://doi.org/https://doi.org/10.1108/13563280210449804

Bass, B. M. (1985). Leadership and performance beyond expectations.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications Inc.

Beer, M., & Nohria, N. (2000). Cracking the code of change. *Harvard Business Review*, *78*(3), 133-141.

Bekmukhambetova, A. (2021). Comparative Analysis of Change Management Models Based on an Exploratory Literature Review. https://doi.org/doi:10.14267/978-963-503-867-1_10

Bennis, W., & Nanus, B. (1985). The strategies for taking charge. *Leaders, New York: Harper. Row*, *41*.

Boso, N., Adeleye, I., Donbesuur, F., & Gyensare, M. (2019). Do entrepreneurs always benefit from business failure experience? *Journal of Business Research*, *98*, 370-379. https://doi.org/https://doi.org/10.1016/j.jbusres.2018.01.063

Bourne, M., Neely, A., Mills, J., & Platts, K. (2003). Why some performance measurement initiatives fail: lessons from the change management literature. *International Journal of Business Performance Management*, *5*(2-3), 245-269.

Burke, W. W. (1982). *Organization development: Principles and practices*. Little, Brown.

Burke, W. W. (2017). *Organization change: Theory and practice*. Sage publications.

Burnes, B. (2004a). Kurt Lewin and complexity theories: back to the future? *Journal of change management*, *4*(4), 309-325. https://doi.org/https://doi.org/10.1080/1469701042000303811

Burnes, B. (2004b). Kurt Lewin and the planned approach to change: a re-appraisal. *Journal of Management Studies*, *41*(6), 977-1002. https://doi.org/https://doi.org/10.1111/j.1467-6486.2004.00463.x

Burnes, B. (2004c). *Managing change: A strategic approach to organisational dynamics*. Pearson Education.

Burnes, B. (2011). Introduction: Why does change fail, and what can we do about it? *Journal of change management*, *11*(4), 445-450. https://doi.org/https://doi.org/10.1080/14697017.2011.630507

Burnes, B., & Jackson, P. (2011). Success and failure in organizational change: An exploration of the role of values. *Journal of change management*, *11*(2), 133-162. https://doi.org/https://doi.org/10.1080/14697017.2010.524655

Burns, J. M. (1978). *Leadership*. Harper & Row Publishers.

Calegari, M. F., Sibley, R. E., & Turner, M. E. (2015). A roadmap for using Kotter's organizational change model to build faculty engagement in accreditation. *Academy of Educational Leadership Journal*, *19*(3), 31.

Cameron, E., & Green, M. (2019). *Making sense of change management: A complete guide to the models, tools and techniques of organizational change*. Kogan Page Publishers.

Caramela, S. (2021). *Working From Home Increases Productivity*. Business News Daily. Retrieved 21/01 from https://www.businessnewsdaily.com/15259-working-from-home-more-productive.html

Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., & Klarsfeld, A. (2021). Adjusting to epidemic-induced telework: Empirical insights from teleworkers in France. *European Journal of Information Systems*, *30*(1), 69-88. https://doi.org/https://doi.org/10.1080/0960085X.2020.1829512

Chattopadhyay, S. (2021). The Pandemic of Productivity: The Work of Home and the Work from Home. *Anthropology in Action*, *28*(1), 47-51. https://doi.org/https://doi.org/10.3167/aia.2021.280109

Chevez, A., & Huppatz, D. (2017). *A short history of the office*. The Conversation. Retrieved 11/03/2022 from https://theconversation.com/a-short-history-of-the-office-82000

Child, J. (2015). *Organization: contemporary principles and practice*. John Wiley & Sons.

Choudhury, P. (2020). *Our Work-from-Anywhere Future*. Harvard Business Review. Retrieved 01/09/2022 from https://hbr.org/2020/11/our-work-from-anywhere-future

Clark, K. B., Clark, M. P., Newcomb, T., & Hartley, E. (1947). Readings in social psychology. *New York: Hold*, 169-178.

Coghlan, D., & Brannick, T. (2003). Kurt Lewin: The" practical theorist" for the 21st century. *Irish Journal of Management*, *24*(2), 31-37.

Collins, C. (2020). Productivity in a pandemic. *Science*, *369*(6504), 603-603. https://doi.org/doi:10.1126/science.abe1163

Connley, C., Hess, A. J., & Liu, J. (2020). *13 ways the coronavirus pandemic could forever change the way we work*. CNBC Make It. Retrieved 11/04/2022 from https://www.cnbc.com/2020/04/29/how-the-coronavirus-pandemic-will-impact-the-future-of-work.html

Coombs, W. T., & Holladay, S. J. (2022). *The handbook of crisis communication*. John Wiley & Sons.

Cooper, C. D., & Kurland, N. B. (2002). Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *23*(4), 511-532. https://doi.org/https://doi.org/10.1002/job.145

Cooper, C. L. (2021). *Psychological insights for understanding COVID-19 and work*. Routledge.

Covey, S. R. (2013). *The 8th habit: From effectiveness to greatness*. Simon and Schuster.

Crandall, W., & Gao, L. (2005). An update on telecommuting: Review and prospects for emerging issues. *S.A.M. Advanced Management Journal*, *70*(3), 30-37.

Crandall, W. R., Parnell, J. A., & Spillan, J. E. (2013). *Crisis management: Leading in the new strategy landscape*. Sage Publications.

Craven, M., Liu, L., Mysore, M., & Wilson, M. (2020). COVID-19: Implications for business. *McKinsey & Company*, *8*.

Criscuolo, C., Nicoletti, G., Gal, P., & Leidecker, T. (2020). *Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?* Secretary-General of the OECD. Retrieved 11/03/2022 from https://www.oecd.org/coronavirus/policy-responses/productivity-gains-from-teleworking-in-the-post-covid-19-era-a5d52e99/

Crouhy, M., Galai, D., & Mark, R. (2006). *The essentials of risk management* (Vol. 1). McGraw-Hill New York.

Cucinotta, D., & Vanelli, M. (2020). WHO declares COVID-19 a pandemic. *Acta Bio Medica: Atenei Parmensis*, *91*(1), 157. https://doi.org/https://doi.org/10.23750/abm.v91i1.9397

Cummings, S., Bridgman, T., & Brown, K. G. (2016). Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management. *Human relations*, *69*(1), 33-60. https://doi.org/https://doi.org/10.1177/001872671557770

Da, S., Fladmark, S. F., Wara, I., Christensen, M., & Innstrand, S. T. (2022). To change or not to change: A study of workplace change during the COVID-19 pandemic. *International journal of environmental research and public health*, *19*(4), 1982. https://doi.org/https://doi.org/10.3390/ijerph19041982

Dalenogare, L. S., Benitez, G. B., Ayala, N. F., & Frank, A. G. (2018). The expected contribution of Industry 4.0 technologies for industrial performance. *International journal of production economics*, *204*, 383-394. https://doi.org/https://doi.org/10.1016/j.ijpe.2018.08.019

Davis, N. (2016). *What is the fourth industrial revolution?* World Economic Forum. Retrieved 20/08/2022 from https://www.weforum.org/agenda/2016/01/what-is-the-fourth-industrial-revolution/

Dawson, P. M. (1994). *Organizational change: A processual approach*. Paul Chapman Publishing.

de Paula, A. P. P., & Wood Jr, T. (2009). Pop-management: tales of passion, power and profit. *International Journal of Organization Theory & Behavior*. https://doi.org/https://doi.org/10.1108/IJOTB-12-04-2009-B003

Decker, P., Durand, R., Mayfield, C. O., McCormack, C., Skinner, D., & Perdue, G. (2012). Predicting implementation failure in organization change. *Journal of Organizational Culture, Communications and Conflict*, *16*(2), 29-49.

Deming, W. E. (2018). *Out of the Crisis, reissue*. MIT press.

Department of Sociology. (2023). *The Chi-Square Test for Independence*. University of Utah. Retrieved 04/07/2023 from https://soc.utah.edu/sociology3112/chi-square.php

Dijesh, K., & Mary, R. R. (2017). Analysis of change models and evolving business strategies for proposed change in dynamic environment. *International Research Journal of Engineering and Technology*, *4*(3), 1351-1357.

Drucker, P. (2012). *The practice of management*. Routledge.

Duck, J. D. (1993). Managing change: The art of balancing. *Harvard Business Review*, *71*(6), 109-118. https://hbr.org/1993/11/managing-change-the-art-of-balancing

Dudovskiy, J. (2022). *Quantitative Data Analysis*. Business Research Methodology. Retrieved 11/19/2022 from https://research-methodology.net/research-methods/data-analysis/quantitative-data-analysis/

Durand, R., & Calori, R. (2006). Sameness, otherness? Enriching organizational change theories with philosophical considerations on the same and the other. *Academy of Management Review*, *31*(1), 93-114. https://doi.org/https://doi.org/10.5465/amr.2006.19379626

Eccles, T. (1994). *Succeeding with change: Implementing action-driven strategies*. McGraw-Hill Book Company.

Elving, W. J. L. (2005). The role of communication in organisational change. *Corporate Communications: An International Journal*, *10*(2), 129-138. https://doi.org/https://doi.org/10.1108/13563280510596943

Eteng, O. (2022). *Quantitative Data Analysis: Methods & Techniques*. Hevo Data Inc. Retrieved 11/19/2022 from https://hevodata.com/learn/quantitative-data-analysis/

Felstead, A., & Henseke, G. (2017). Assessing the growth of remote working and its consequences for effort, well-being and work-life balance. *New Technology, Work and Employment*, *32*(3), 195-212. https://doi.org/https://doi.org/10.1111/ntwe.12097

Ferguson, N. M., Donnelly, C. A., & Anderson, R. M. (2001). Transmission intensity and impact of control policies on the foot and mouth epidemic in Great Britain. *Nature*, *413*(6855), 542-548. https://doi.org/https://doi.org/10.1038/35097116

Festinger, L., & Coyle, G. L. (1949). *Current developments in group dynamics*. National Association of Social Workers.

Gaivoronskaya, T., Vermennikova, L., Chabanets, E., & Rykova, A. (2021). Force Field Analysis and K. Lewin's Change Model as leverages of "Lean University" principles in student environment. *Kuban Scientific Medical Bulletin*, *28*(1), 152-165. https://doi.org/https://doi.org/10.25207/1608-6228-2021-28-1-152-165

Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences.

Journal of Applied Psychology, *92*(6), 1524. https://doi.org/https://doi.org/10.1037/0021-9010.92.6.1524

Galli, B. J. (2018). Change management models: A comparative analysis and concerns. *IEEE Engineering Management Review*, *46*(3), 124-132. https://doi.org/10.1109/EMR.2018.2866860

Gallup. (2022). *State of the Global Workplace: 2022 Report*. https://www.gallup.com/workplace/349484/state-of-the-global-workplace.aspx

Galvani, A. P. (2004). Emerging infections: what have we learned from SARS? *Emerging infectious diseases*, *10*(7), 1351. https://doi.org/10.3201/eid1007.040166

Gareth, J., Daniela, W., Trevor, H., & Robert, T. (2021). *An Introduction to Statistical Learning: with Applications in R*. Springer.

Gladwell, M. (2006). *The tipping point: How little things can make a big difference*. Little, Brown.

Glen, S. (2022a). *Chi-Square Statistic: How to Calculate It / Distribution*. Retrieved 12/12/2022 from https://www.statisticshowto.com/probability-and-statistics/chi-square/

Glen, S. (2022b). *Wilcoxon Signed Rank Test: Definition, How to Run, SPSS*. Retrieved 12/12/2022 from https://www.statisticshowto.com/probability-and-statistics/statistics-definitions/wilcoxon-signed-rank-test/

Gonzalez-Mulé, E., & Cockburn, B. S. (2021). This job is (literally) killing me: A moderated-mediated model linking work characteristics to mortality. *Journal of Applied Psychology*, *106*(1), 140.

Gorvine, B. J., Rosengren, K. S., Stein, L., & Biolsi, K. (2017). *Research methods: From theory to practice*. Oxford University Press.

Goss, T., & Pascale, R. (1993). The reinvention roller coaster: Risking the present for a powerful future. *Harvard Business Review*, *71*(6), 97-106.

Graetz, F. (2000). Strategic change leadership. *Management decision*, *38*(8), 550-564. https://doi.org/https://doi.org/10.1108/00251740010378282

Hamel, G. (2002). *Leading the Revolution*. Plume.

Hastie, T., Tibshirani, R., Friedman, J. H., & Friedman, J. H. (2009). *The elements of statistical learning: data mining, inference, and prediction* (Vol. 2). Springer New York. https://doi.org/https://doi.org/10.1007/978-0-387-21606-5

Hayes, J. (2022). *The Theory and Practice of Change Management*. Palgrave, New York. https://doi.org/10.1057/palgrave.abm.9200152

Hendry, C. (1996). Understanding and creating whole organizational change through learning theory. *Human relations*, *49*(5), 621-641. https://doi.org/https://doi.org/10.1177/001872679604900505

Herold, D. M., Fedor, D. B., Caldwell, S., & Liu, Y. (2008). The effects of transformational and change leadership on employees' commitment to a change: a multilevel study. *Journal of Applied Psychology*, *93*(2), 346. https://doi.org/https://doi.org/10.1037/0021-9010.93.2.346

Hertz, N. (2020). *The Lonely Century: Coming Together in a World That's Pulling Apart*. Sceptre.

Hiatt, J. M. (2006). *ADKAR: a model for change in business, government, and our community*. Prosci.

Hobsbawm, J. (2021). The Nowhere Office. *Demos*, 30. https://demos.co.uk/wp-content/uploads/2021/03/The-Nowhere-Office.pdf

Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). Sage Publishing Inc.

Holland, W. E. (2000). *Change Is the Rule: Practical Actions for Change on Target, on Time, on Budget*. WinHope Press, dba Holland & Davis.

Hopkin, P. (2018). *Fundamentals of risk management: understanding, evaluating and implementing effective risk management*. Kogan Page Publishers.

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., & Gu, X. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The lancet*, *395*(10223), 497-506. https://doi.org/https://doi.org/10.1016/S0140-6736(20)30183-5

Hussain, S. T., Lei, S., Akram, T., Haider, M. J., Hussain, S. H., & Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation & Knowledge*, *3*(3), 123-127. https://doi.org/https://doi.org/10.1016/j.jik.2016.07.002

Ibeawuchi, N., Nwagbara, U., Alhassan, Y., & Brown, C. (2021). Leading change in difficult times: the role of effective leadership in confronting educational challenges of coronavirus pandemic. *Economic Insights–Trends and Challenges*, *2021*(1), 11-20. https://doi.org/https://doi.org/10.51865/eitc.2021.01.02

Jackowska, M., & Lauring, J. (2021). What are the effects of working away from the workplace compared to using technology while being at the workplace? Assessing work context and personal context in a global virtual setting. *Journal of International Management*, *27*(1), 100826. https://doi.org/https://doi.org/10.1016/j.intman.2021.100826

James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An introduction to statistical learning* (Vol. 112). Springer.

Johansson, C., & Heide, M. (2008). Speaking of change: three communication approaches in studies of organizational change. *Corporate Communications: An International Journal*, *13*(3), 288-305. https://doi.org/https://doi.org/10.1108/13563280810893661

Junnaid, M. H., Miralam, M. S., & Jeet, V. (2020). Leadership and Organizational Change Management in Unpredictable Situations in Responding to Covid-19 Pandemic. *Leadership*, *11*, 16.

Kahneman, D. (2012). *Thinking, Fast and Slow*. Penguin.

Kanter, R. M. (2003). *The Challenge of Organizational Change: How companies experience it and leaders guide it*. Free Press - Simon and Schuster Inc.

Kelliher, C., & Anderson, D. (2008). For better or for worse? An analysis of how flexible working practices influence employees' perceptions of job quality. *The International Journal of Human Resource Management*, *19*(3), 419-431. https://doi.org/https://doi.org/10.1080/09585190801895502

Kim, W. C., & Mauborgne, R. (2014). *Blue ocean strategy, expanded edition: How to create uncontested market space and make the competition irrelevant*. Harvard business review Press.

Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., Bamberger, P., Bapuji, H., Bhave, D. P., & Choi, V. K. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, *76*(1), 63. https://doi.org/https://doi.org/10.1037/amp0000716

Kolb, D. A., & Frohman, A. L. (1970). An organization development approach to consulting. *Sloan Management Review (pre-1986)*, *12*(1), 51.

Kotter, J. P. (1990). *Force for change: How leadership differs from management*. The Free Press.

Kotter, J. P. (1996). *Leading change*. Harvard Business Press.

Kotter, J. P. (2008). *Sense of Urgency*. Harvard Business Review Press.

Kotter, J. P. (2014). Accelerate. Boston: Harvard Business Review Press. *Google Scholar*.

Kotter, J. P. (2019). *Accelerate: Building Strategic Agility for a Faster-Moving World*. Harvard Business Review Press.

Kotter, J. P., Akhtar, V., & Gupta, G. (2021). *Change: How organizations achieve hard-to-imagine results in uncertain and volatile times*. John Wiley & Sons.

Kotter, J. P., Kotter, J., & Rathgeber, H. (2006). *Our iceberg is melting: Changing and succeeding under any conditions*. Pan Macmillan.

Kourti, A., Stavridou, A., Panagouli, E., Psaltopoulou, T., Spiliopoulou, C., Tsolia, M., Sergentanis, T. N., & Tsitsika, A. (2021). Domestic Violence During the COVID-19 Pandemic: A Systematic Review. *Trauma, Violence, & Abuse*. https://doi.org/https://doi.org/10.1177/15248380211038690

Kouzes, J. M., & Posner, B. Z. (1993). *Leadership Practices Inventory. A Self-assessment and Analysis*. San Francisco, CA: Jossey-Bass.

Kramer, A., & Kramer, K. Z. (2020). The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. *Journal of Vocational Behavior*, *119*. https://doi.org/https://doi.org/10.1016/j.jvb.2020.103442

Lambert, L. (2020). *Nearly a third of workers don't want to ever return to the office*. Fortune Media IP Limited. Retrieved 11/03/2022 from https://fortune.com/2020/12/06/offices-covid-workers-returning-never-want-to-stats-data-2/

Lawrence, R. J. (2020). Responding to COVID-19: What's the Problem? *Journal of Urban Health*, *97*(4), 583-587. https://doi.org/https://doi.org/10.1007/s11524-020-00456-4

Leighton, D., & Gregory, T. (2011). *Reinventing the workplace*. Demos London. https://demosuk.wpengine.com/files/Reinventing_the_Workplace_-_web.pdf?1310724451

Levasseur, R. E. (2001). People skills: Change management tools—Lewin's change model. *Interfaces*, *31*(4), 71-73. https://doi.org/https://doi.org/10.1287/inte.31.4.71.9674

Lewin, K. (1947). Frontiers in group dynamics: II. Channels of group life; social planning and action research. *Human relations*, *1*(2), 143-153. https://doi.org/https://doi.org/10.1177/001872674700100201

Lippitt, R., & Spalding, W. B. (1958). *The dynamics of planned change: A comparative study of principles and techniques*. Harcourt, Brace & World.

Littman, R. J. (2009). The Plague of Athens: Epidemiology and Paleopathology. *Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine*, *76*(5), 456-467. https://doi.org/https://doi.org/10.1002/msj.20137

Lowery, M. S. (2010). *Change management in a dynamic information technology environment: Inquiries into the Adkar Model for change management results* Regis University, Colorado, United States of America].

Luecke, R. (2003). *Managing change and transition* (Vol. 3). Harvard Business Press.

Maital, S., & Barzani, E. (2020). The global economic impact of COVID-19: A summary of research. *Samuel Neaman Institute for National Policy Research*, *2020*, 1-12.

Majumdar, P., Biswas, A., & Sahu, S. (2020). COVID-19 pandemic and lockdown: cause of sleep disruption, depression, somatic pain, and increased screen exposure of office workers and students of India. *Chronobiology international*, *37*(8), 1191-1200. https://doi.org/https://doi.org/10.1080/07420528.2020.1786107

Malopinsky, L. V., & Osman, G. (2006). Dimensions of organizational change. *Handbook of human performance technology*, *3*, 262-286.

Mayon-White, B. (1993). Problem-solving in small groups: team members as agents of change. *Managing change*, *2*, 132-142.

McAllister, A. (2019). *Deliver Lasting Business Transformation - Kotter's 8 Steps*. Splunk Inc. Retrieved 30/10 from https://www.splunk.com/en_us/blog/tips-and-tricks/deliver-lasting-business-transformation-kotter-s-8-steps.html

Meaney, M., & Pung, C. (2008). McKinsey global results: Creating organizational transformations. *The McKinsey Quarterly*, *7*(3), 1-7.

Mehrolia, S., Alagarsamy, S., & Balachandran, A. (2020). Work from home in the pandemic era: Loss of mental equilibrium? *Asian Journal of Psychiatry*, *55*, 102490-102490. https://doi.org/ https://10.1016/j.ajp.2020.102490

Mellahi, K., & Wilkinson, A. (2004). Organizational failure: a critique of recent research and a proposed integrative framework. *International Journal of Management Reviews*, *5*(1), 21-41. https://doi.org/https://doi.org/10.1111/j.1460-8545.2004.00095.x

Milczarek, M., Schneider, E., & González, E. R. (2009). *OSH in figures: stress at work - facts and figures*. E. Communities. https://osha.europa.eu/en/publications/osh-figures-stress-work-facts-and-figures

Minkler, M., Ni, A., Coombe, C. M., & Falbe, J. (2021). *Using Force Field Analysis, SWOT Analysis, and Power Mapping as Strategic Tools in Organizing*.

Mitchell, T. (2010). The resources of economics: Making the 1973 oil crisis. *Journal of Cultural Economy*, *3*(2), 189-204. https://doi.org/https://doi.org/10.1080/17530350.2010.494123

Mitroff, I. I., Shrivastava, P., & Udwadia, F. E. (1987). Effective crisis management. *Academy of Management Perspectives*, *1*(4), 283-292.

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., Zito, M., & Cortese, C. G. (2020). Wellbeing costs of technology use during Covid-19 remote working: An investigation using the Italian translation of the technostress creators scale. *Sustainability*, *12*(15), 5911. https://doi.org/https://doi.org/10.3390/su12155911

Moore, D. S., McCabe, G. P., & Craig, B. A. (2021). *Introduction to the Practice of Statistics* (10 ed.). WH Freeman.

Moran, J. W., & Brightman, B. K. (2001). Leading organizational change. *Career development international*, *6*(2), 111-119.

Morton, C. (2016). *Beyond world class*. Springer.

Murray-Webster, R. (2010). *Management of risk: guidance for practitioners*. The Stationery Office.

Northouse, P. G. (2021). *Leadership: Theory and practice*. Sage publications.

Nutt, P. C. (2003). Why decisions fail: Avoiding the blunders and traps that lead to debacles. In: Academy of Management Briarcliff Manor, NY 10510.

Orbach, S. (2008). Work is where we live: Emotional literacy and the psychological dimensions of the various relationships there. *Emotion, space and society*, *1*(1), 14-17. https://doi.org/https://doi.org/10.1016/j.emospa.2008.08.012

Oreg, S., Bartunek, J. M., Lee, G., & Do, B. (2018). An affect-based model of recipients' responses to organizational change events. *Academy of Management Review*, *43*(1), 65-86. https://doi.org/https://doi.org/10.5465/amr.2014.0335

Osorio, J. (2014). *Numbers under fire: The challenges of gathering quantitative data in highly violent settings*. http://webarchive.ssrc.org/working-papers/DSD_ResearchSecurity_06_Osorio.pdf

Parent-Lamarche, A., & Boulet, M. (2021). Workers' stress during the first lockdown: consequences on job performance analyzed with a mediation model. *Journal of occupational and environmental medicine*, *63*(6), 469-475. https://doi.org/https://doi.org/10.1097/JOM.0000000000002172

Paton, R. A., & McCalman, J. (2008). *Change management: A guide to effective implementation*. Sage.

Pawar, A., & Charak, K. (2017). Study on adaptability of change management: review of Kurt Lewins and Kotter model of change. *Research Revolution International Journal of Social Science and Management*, *5*(4), 79-83.

Phillips, S. (2020). Working through the pandemic: Accelerating the transition to remote working. *Business Information Review*, *37*(3), 129-134. https://doi.org/https://doi.org/10.1177/0266382120953308

Piquero, A. R., Jennings, W. G., Jemison, E., Kaukinen, C., & Knaul, F. M. (2021). Domestic violence during the COVID-19 pandemic-Evidence from a systematic review and meta-analysis. *Journal of criminal justice*, *74*. https://doi.org/https://doi.org/10.1016/j.jcrimjus.2021.101806

Pisano, G. P., Sadun, R., & Zanini, M. (2020). Lessons from Italy's response to coronavirus. *Harvard Business Review*, *27*(March).

Pugh, D. (1993). Understanding and managing organizational change. *Managing change*, *2*, 108-112.

Qualtrics. (2022). *Cross tabulation analysis for researchers*. Qualtrics, LLC. Retrieved 12/10/2022 from https://www.qualtrics.com/uk/experience-management/research/cross-tabulation/?rid=cookie&prevsite=de&newsite=uk&geo=&geomatch=?rid=langMatch&prevsite=uk&newsite=de&geo=&geomatch=

Rafferty, A. E., & Griffin, M. A. (2006). Perceptions of organizational change: a stress and coping perspective. *Journal of Applied Psychology*, *91*(5), 1154-1162. https://doi.org/https://doi.org/10.1037/0021-9010.91.5.1154

Rees, T. (2018). *Wholesome Leadership: The heart, head, hands & health of school leaders*. John Catt.

Rider, C. I., & Negro, G. (2015). Organizational failure and intraprofessional status loss. *Organization Science*, *26*(3), 633-649. https://doi.org/http://dx.doi.org/10.1287/orsc.2014.0953

Robbins, S. P., Judge, T. A., & Campbell, T. T. (2010). *Organizational behaviour*. Pearson education.

Robbins, S. P., Judge, T. A., & Campbell, T. T. (2017). Organizational behaviour. In: Pearson.

Salkind, N. J., & Frey, B. B. (2021). *Statistics for people who (think they) hate statistics: Using Microsoft Excel*. SAGE Publications, Inc.

Sarayreh, B. H., Khudair, H., & Barakat, E. (2013). Comparative study: The Kurt Lewin of change management. *International Journal of Computer and Information Technology*, *2*(4), 626-629.

Schech-Storz, M. D. (2013). *Organizational change success in project management: A comparative analysis of two models of change* Capella University].

Schein, E. H. (1961). Management development as a process of influence. *Industrial Management Review (pre-1986)*, *2*(2), 59.

Schein, E. H. (1988). *Organizational Psychology*. Englewood Cliffs NJ: Prentice-Hall.

Schein, E. H. (1996). Kurt Lewin's change theory in the field and in the classroom: Notes toward a model of managed learning. *Systems practice*, *9*(1), 27-47. https://doi.org/https://doi.org/10.1007/BF02173417

Schein, E. H. (2010). *Organizational culture and leadership* (Vol. 2). John Wiley & Sons.

Schein, E. H., & Bennis, W. G. (1965). *Personal and organizational change through group methods: The laboratory approach*. Wiley New York.

Sengupta, A. (2022). *Microsoft CEO Satya Nadella offers way to bring employees back to office, says managers can't do it*. India Today. Retrieved 11/09/2022 from https://www.indiatoday.in/technology/news/story/microsoft-ceo-satya-nadella-offers-way-to-bring-employees-back-to-office-says-managers-cant-do-it-2287716-2022-10-20

Senior, B., & Fleming, J. (2006). *Organizational change*. Pearson Education.

Sharma, G. D., Kraus, S., Srivastava, M., Chopra, R., & Kallmuenzer, A. (2022). The changing role of innovation for crisis management in times of COVID-19: An integrative literature review. *Journal of Innovation & Knowledge*. https://doi.org/https://doi.org/10.1016/j.jik.2022.100281

Shaw, M. (2018). Unplanned change and crisis management. *Global encyclopedia of public administration, public policy, and governance. Springer*.

Shea, J. P. (1951). Logico-Mathematics.(Book Reviews: Field Theory in Social Science). *The Scientific Monthly*, *73*(1), 65-66.

Shin, J., Taylor, M. S., & Seo, M.-G. (2012). Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal*, *55*(3), 727-748. https://doi.org/https://doi.org/10.5465/amj.2010.0325

Sonenshein, S. (2010). We're changing—Or are we? Untangling the role of progressive, regressive, and stability narratives during strategic change implementation. *Academy of Management Journal*, *53*(3), 477-512. https://doi.org/https://doi.org/10.5465/amj.2010.51467638

Spataro, J. (2020). A pulse on employees' wellbeing, six months into the pandemic. *Microsoft 365*. https://www.microsoft.com/en-us/microsoft-365/blog/2020/09/22/pulse-employees-wellbeing-six-months-pandemic/

Spyrou, M. A., Keller, M., Tukhbatova, R. I., Scheib, C. L., Nelson, E. A., Andrades Valtueña, A., Neumann, G. U., Walker, D., Alterauge, A., & Carty, N. (2019). Phylogeography of the second plague pandemic revealed through analysis of historical Yersinia pestis genomes. *Nature communications*, *10*(1), 1-13. https://doi.org/https://doi.org/10.1038/s41467-019-12154-0

Stolovitch, H. D., & Keeps, E. J. (2006). *Handbook of human performance technology: Principles, practices, and potential*. John Wiley & Sons.

Strebel, P. (1992). Choosing the right change path. *California Management Review*, *36*(2), 29-51. https://doi.org/https://doi.org/10.2307/41165743

Suzman, J. (2020). *Work: A history of how we spend our time*. Bloomsbury Publishing.

Talmaciu, I. (2014). Comparative Analysis of Different Models of Organizational Change. *Valahian Journal of Economic Studies*, *5*(4), 77-86.

Tandon, R. (2020). The COVID-19 pandemic, personal reflections on editorial responsibility. *Asian Journal of Psychiatry*, *50*. https://doi.org/https://doi.org/10.1016/j.ajp.2020.102100

Taylor, E. (2020). *VW CEO says carmaker faces same fate as Nokia without urgent reforms*. Retrieved 25/09/2022 from https://www.reuters.com/article/us-volkswagen-strategy-diess-idUSKBN1ZF1OB

Tichy, N. M., & Devanna, M. A. (1986). The transformational leader. *Training & Development Journal*, *40*(7), 27-32.

Todnem, R. (2005). Organisational change management: A critical review. *Journal of change management*, *5*(4), 369-380. https://doi.org/https://doi.org/10.1080/14697010500359250

Tracy, S. (2022). *Types of Rating Scales in Quantitative Research*. Analythical. Retrieved 11/19/2022 from https://analythical.com/blog/types-of-rating-scales

Tsoucalas, G., Kousoulis, A., & Sgantzos, M. (2016). The 1918 Spanish Flu Pandemic, the origins of the H1N1-virus strain, a glance in history. *European Journal of Clinical and Biomedical Sciences*, *2*(4), 23-28. https://doi.org/10.11648/j.ejcbs.20160204.11

Waddell, D., Creed, A., Cummings, T. G., & Worley, C. G. (2019). *Organisational change: Development and transformation*. Cengage AU.

Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020). A novel coronavirus outbreak of global health concern. *The lancet*, *395*(10223), 470-473. https://doi.org/https://doi.org/10.1016/S0140-6736(20)30185-9

Westfall, C. (2020). *New Survey Shows 47% Increase In Productivity: 3 Things You Must Do When Working From Home*. Retrieved 11/04/2022 from https://www.forbes.com/sites/forbesdigitalcovers/2018/07/11/meet-the-unknown-immigrant-billionaire-betting-her-fortune-to-take-on-musk-in-space/?

Whelan-Berry, K. S., Gordon, J. R., & Hinings, C. (2003). Strengthening organizational change processes: Recommendations and implications from a multilevel analysis. *The Journal of Applied Behavioral Science*, *39*(2), 186-207. https://doi.org/https://doi.org/10.1177/0021886303256270

Wolor, C. W., Dalimunthe, S., Febrilia, I., & Martono, S. (2020). How to manage stress experienced by employees when working from home due to the Covid-19 virus outbreak. *International Journal of Advanced Science and Technology*, *29*(5), 8359-8364.

Wong, Q., Lacombe, M., Keller, R., Joyce, T., & O'Malley, K. (2019). Leading change with ADKAR. *Nursing management*, *50*(4), 28-35. https://doi.org/https://doi.org/10.1097/01.NUMA.0000554341.70508.75

Yue, C. A., Men, L. R., & Ferguson, M. A. (2019). Bridging transformational leadership, transparent communication, and employee openness to change: The mediating role of trust. *Public Relations Review*, *45*(3). https://doi.org/https://doi.org/10.1016/j.pubrev.2019.04.012

Yukl, G. (2012). *Leadership in Organizations*. Pearson Ed.

Zarocostas, J. (2020). What next for the coronavirus response? *The lancet*, *395*(10222), 401. https://doi.org/https://doi.org/10.1016/S0140-6736(20)30292-0

8   LIST OF TABLES

9 LIST OF FIGURES

10 LIST OF ABBREVIATIONS
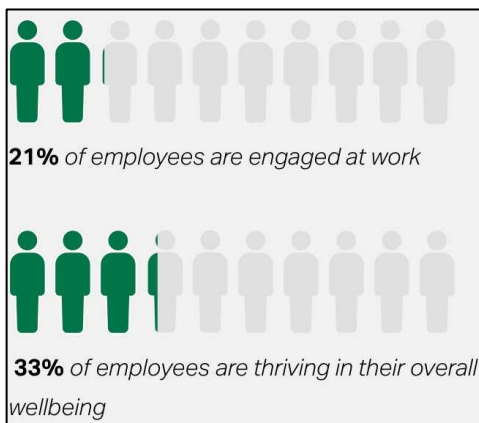
BC	before Christ
Covid-19	Coronavirus disease 2019 (2019-nCoV)
etc.	et cetera
EFS	Enterprise Feedback Suite
EMEA	Europe Middle East and Africa
GDPR	General Data Protection Regulation
H	Hypothesis
i.e.	id est / that is
M	Measure
MNC	multinational corporation
MS	Microsoft
n-gram	a contiguous sequence of n items from a given sample of text or speech.
NGO	Non-governmental institutions
OPEC	Organization of the Petroleum Exporting Countries
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
WHO	World Health Organization

11 ANNEX

11.1 Google Scholar search on "Kurt Lewin 1951"

11.2 Gallup. (2022). State of the Global Workplace: 2022 Report.

Global engagement and wellbeing (Gallup, 2022)
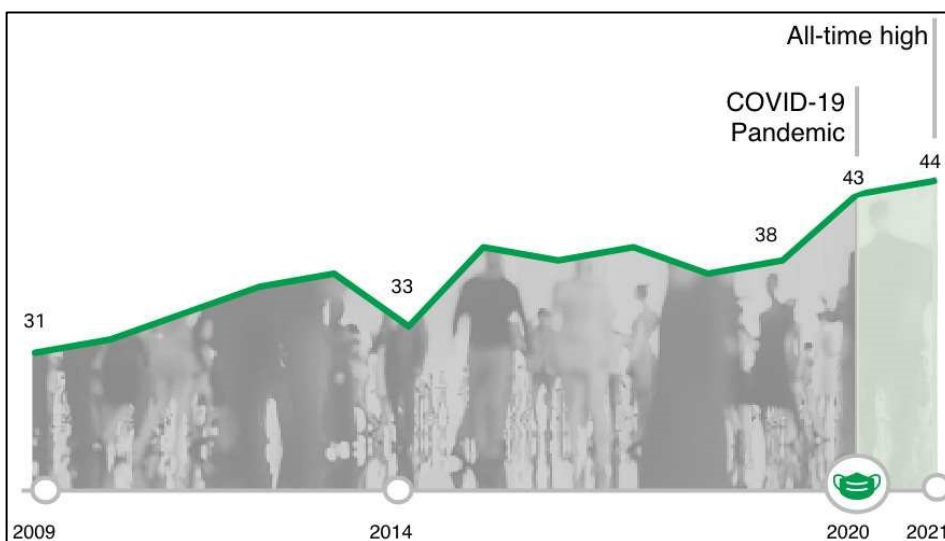
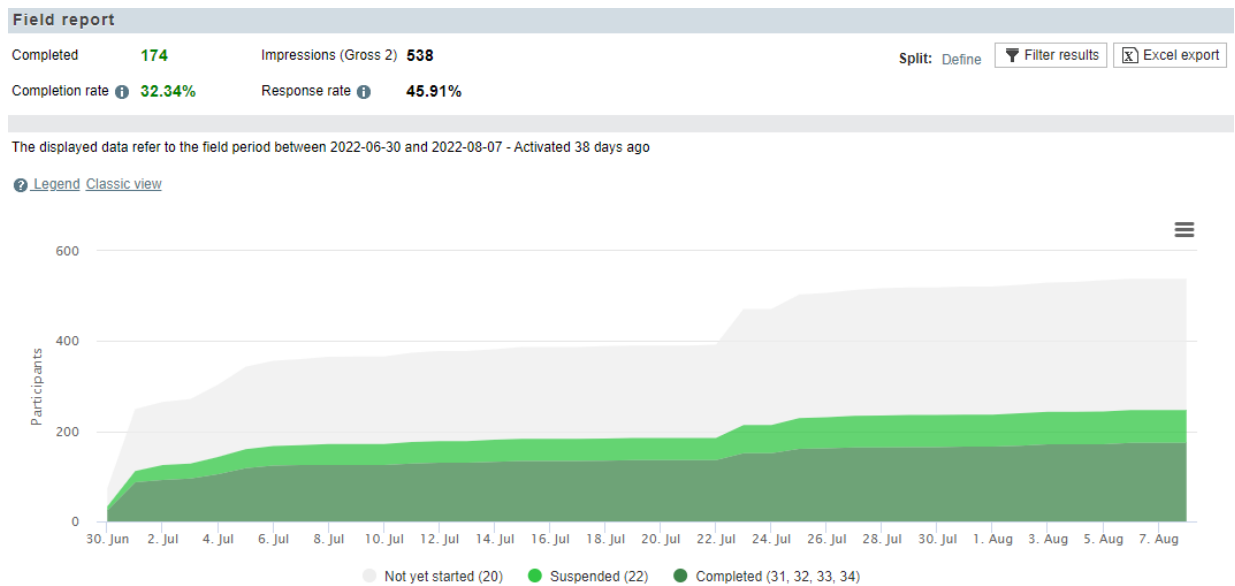*Stress among the world's employees (Gallup, 2022)*

11.3 EFS project status (Source: EFS)

11.4 Field report of the survey project (Source: EFS)

11.5 Survey questionnaire

[TIVIAN]

Productivity in Uncertain Times

Dear participant,

Thank you for participating in my PHD research by completing the following survey.

The aim of this research is to analyze change management models, their impact during uncertain times, on work, our mental equilibrium, received support and looking at the possibility of "a nowhere office".

The questionnaire is anonymous and used solely for academic purposes.

Sincerely, Alexandra Arbter

8% CONTINUE

[TIVIAN]

Is the presence of a strong organizational culture indicative of success in driving organizational change?

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree

Do you know of any plans your organization has in place to mitigate resistance to change?

○ Yes   ○ Not sure   ○ No

Have there ever been change teams ("champs") in place to help you through organizational change?

○ Yes   ○ Not sure   ○ No

Has your leadership shared with you any short-term wins (e.g., facilitation of business continuity) through the stages of transition?

○ Yes, all the time   ○ Sometimes   ○ Not sure   ○ No

17% CONTINUE

[T I V I A N]

Have you ever been involved in consultation or a decision-making processes during any organizational change?

○ Yes   ○ No

Do you think management should communicate rational and requirements of a change process from the moment planning begins?

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree

Did your organization provide you with helpful processes to continue your work from home during the 1st lockdown of the Covid-19 pandemic?

○ Completely   ○ Yes, to a certain point   ○ Not sure   ○ Not effectively   ○ No

25%   CONTINUE

[T I V I A N]

During Covid-19 lock-downs, did your team celebrate success?

During remote work, any virtual celebration activities.

○ Yes, for almost any reason possible   ○ Sometimes   ○ Not sure   ○ We tried but did not go well

○ No, we did not try

Did you have flexibility to organize your work time while working from home during the 1st lockdown?

○ Full flexibility   ○ Some flexibility   ○ Not at all
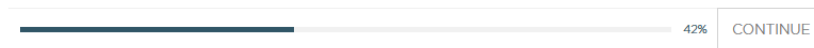
33%   CONTINUE

159

[TIVIAN]

Were you motivated by your manager to continue to perform well in your job during the pandemic?

○ Extremely   ○ Yes, a bit   ○ Not sure   ○ Tried, but not well   ○ Not at all

How viable did your manager perceive you working from home?

○ Extremely well   ○ Good   ○ Not sure   ○ Concerned   ○ Not well at all

42%   CONTINUE

[TIVIAN]

While working from home, did you learn any new skills that helped you accomplish your work better?

○ I did self-based learning.   ○ I received a training plan from my manager.

○ Both (self-based learning + training plan from manager).   ○ I wanted, but did now know how.   ○ Nothing.

Do you think that videoconferencing platforms have improved workplace collaboration?

(during the Covid-19 pandemic)

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree
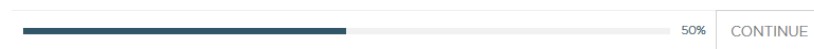
50%   CONTINUE

[TIVIAN]

What behaviors were displayed by leadership during the initial stages of the change process (Covid-19 impact)?

Please select any that apply.

☐ Appreciation   ☐ Empathized with my experience   ☐ Saw the world from my perspective

☐ Confusion about the situation   ☐ Social distance   ☐ Did not observe any

58%   CONTINUE

160

[TIVIAN]

Is it easier for you to have a better work-life balance while also working productively from home?

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree

Can home office provide a reset to workplace stresses and challenges?

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree

Working from home in the pandemic era: did you experience a loss of mental equilibrium (balance)?

○ Completely agree   ○ Agree   ○ Not sure   ○ Disagree   ○ Completely disagree

Have you been encouraged by your management to continue to work from home?

○ I am asked to go back to the office.   ○ I am offered a hybrid work solution.   ○ I can work 100% from home now.

67%   CONTINUE

[TIVIAN]

What happened when you started to work from home during the first Covid-19 lockdown?

☐ Transformation of your home sphere (e.g., multiple workplaces at once, professional life melting into personal, etc.).

☐ I dealt with health issues (anxieties, physical issues, stress, loneliness, etc.).   ☐ Not more online meetings than before.

☐ A lot more online meetings.   ☐ I increased my social network onine.   ☐ Nothing changed.

Will you continue working from home?

○ No   ○ Not sure   ○ Hybrid approach   ○ 100% from home now

75%   CONTINUE

161

Was your manager immediately able to enable you to work remotely?

○ Yes   ○ No

Was your manager able to close gaps of different remote working skills within your team?

This question is about using conference tools, presentation and collaboration skills or even manage worktime when working remotely.

○ Yes   ○ Not sure   ○ No

Did your manager cultivate a (more) digital culture which your team now continues?

○ Yes   ○ Not sure   ○ No

83%   CONTINUE

Demographic questions

What is your gender?

○ Female   ○ Male   ○ Other

When were you born?

1930's

What is your country of workplace?

Please select

What is the highest degree or level of education you have completed?

○ High School

○ Bachelor's Degree

○ Master's Degree

○ PHD or higher

○ Trade School

○ Prefer not to say

What is your current employment status?

- ○ Employed Full-Time
- ○ Employed Part-Time
- ○ Seeking opportunities
- ○ Retired
- ○ Prefer not to say

In what career stage are you presently?

- ○ Individual contributor
- ○ Management
- ○ Leadership
- ○ Other

How do you best describe your company?

- ○ Multinational organization
- ○ Academic institution
- ○ Self employed
- ○ Non-governmental organization (NGO)
- ○ Other

Do you work in a virtual team?

○ Yes   ○ No

How would you describe your job efficiency?

Please select

How big is your team?

Number of people in your team.

- ○ up to 5
- ○ 6 to 10
- ○ 11 to 20
- ○ 21 to 30
- ○ 31 to 40
- ○ 41 to 50
- ○ more than 50

92%   CONTINUE

[TIVIAN]

Thank you for participating in my research!
You can close this window now.

100%

163