

A study of working models from an employee demand perspective during and beyond Covid-19

A Master's Thesis submitted for the degree of
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supervised by
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Affidavit

I, **RANA ESMAEILI, MA**, hereby declare

1. that I am the sole author of the present Master's Thesis, "A STUDY OF WORKING MODELS FROM AN EMPLOYEE DEMAND PERSPECTIVE DURING AND BEYOND COVID-19", 70 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted the topic of this Master's Thesis or parts of it in any form for assessment as an examination paper, either in Austria or abroad.

Vienna, 26.04.2021

Signature

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The completion of this master's thesis could not have been possible without the support of so many people whose names may not all be enumerated but their continued support has guided me through my educational journey.

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Abstract:

The aim of this thesis is to investigate and evaluate the most optimal working model from an employee-demand perspective, in order to assess the most successful outcomes during the pandemic and beyond. The outbreak of the pandemic has created drastic changes in working models, leaving many offices empty and forcing large numbers of employees to work from home.

The goal of this thesis is reached by undertaking a detailed study of work psychology, organizational psychology and other psychological demands of employees. The study will then review different ways of working, with a special focus on the current pandemic situation and its impact on companies and their employees. This study has applied a mixed methodology approach. The first methodology is in the form of a literature review and the second approach is conducting a survey among a target group of fulltime employees, asking about their working styles, motivations and preferences during and after the pandemic.

As a result of both approaches, a hybrid working model is chosen as the most effective working model from an employee perspective, validating a better output for both the workforce and the businesses.

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List of Abbreviations

WFH: Working from Home

FMJ: Fitting the man to the job

FJM: Fitting the job to the man

FWA: Flexible Work Arrangements

CREM: Corporate Real Estate Management

CRE: Corporate Real Estate

KPI: Key Performance Indicator

IOT: Internet of Things

NWW: New Ways of Working

1 Introduction:

In the wake of the current Covid-19 pandemic and its associated consequences, ways of working have radically altered for many organizations. A dramatic transition has occurred as many companies have shifted from established office-based methods and routines of work to a system of working from home (WFH). This enforced change has left office buildings mostly empty and has created a high degree of uncertainty regarding what working models the unknown, post-pandemic, future will hold.

Many organizations are going through a redesign of their workspace and their employees' working ways due to the current situation, but there is still much confusion in the decision-making process regarding what post-pandemic ways of working will look like. Extensive discussions are ongoing about working methods and workforce efficiency with respect to WFH, and much effort is being expended to devise functional office-based models that can meet hygiene and safety standards for Covid-19. The aim of this thesis is to investigate and evaluate different ways of working before, during and after the pandemic and establish the most optimal working model from an employee-demand perspective, in order to assess the most successful outcomes during the pandemic and beyond.

This thesis will first undertake a detailed study of work psychology and discuss the psychological demands of employees. The study will then review different ways of working, with a special focus on the current pandemic situation and its impact on companies and their employees based on the existing studies. Following this, the thesis will present and discuss the results of an anonymized survey that was conducted in an Austrian financial organization. This survey asked employees about their working styles, motivations and preferences during and after the pandemic, with the aim of collecting data to gain insights and identify the most efficient ways of working from the employees' perspective.

The last chapters of this thesis will propose the most effective working model for successful outcomes from an employee-demand perspective during the pandemic and beyond.

2 Definition of Research Problem:

Since the Covid-19 pandemic started, working arrangements have changed in drastic ways. The concept of 9-to-5 work at the office was hugely disrupted and gave way to the predominance of WFH, which has since turned out to be a struggle for many employees.

Remote working has both physical and mental impacts on people.¹ Studies report adverse effects on mental health, low motivation levels and miscommunication as impacts of working remotely during the Covid-19 pandemic.

While there have been many studies covering different work models, more research is needed on the psychological aspects of WFH from the employee's perspective and its effect on workforce performance and productivity. There is no doubt that WFH was an economic savior against the Covid-19 pandemic for many organizations, but the psychological aspects of remote working and the subsequent consequences for employee mental health present a sizeable challenge to shaping a successful and beneficial working model for during and after the pandemic.

This thesis aims to show how a working model can be optimized from an employee-demand perspective to satisfy both the business and the workforce during and after the pandemic. The relevant questions this study seeks to answer include: What would an effective model that considers the psychological aspects of working look like? What measures do organizations need to consider when creating future solutions that will drive the most successful outcomes while protecting their employees' mental health during the pandemic and beyond? This thesis will also discuss how the risk of exposing the workforce to Covid-19 can be minimized while finding the optimal working strategies that consider both workforce mental health and the stakeholder's profit

¹ Sandi Mann, 2003

3 Methodological Approach:

In order to fulfill the purpose of this thesis and to answer the research question, a mixed methodology has been applied. The first methodology is in the form of a literature review on work psychology, organization psychology and different ways of working before and during COVID-19, which situates this study in relation to existing knowledge. The literature review considers scholarly material on traditional and non-traditional working models, with a focus on the assessment of employee performance across various categories using datasets from several reports and surveys.

The second methodological approach is conducting an anonymized survey among the workforce of various departments of an Austrian financial organization, asking about their working styles, motivations and preferences during and after the pandemic. The aim of this survey is to collect data to gather insights and help identify the most efficient ways of working from the employees' perspective.

By combining the two approaches – literature review and survey – this thesis will develop a model from an employee-demand perspective that will outline the most effective working methods for successful outcomes during the pandemic and beyond. The mixed methodology will validate the thesis hypothesis, which has been developed in response to the extensive scholarly research undertaken prior to the survey.

4 Work Psychology

Work psychology is the study of day-to-day individual and collective human behavior in organizations and the workplace to understand how work behavior can be influenced, changed and improved to benefit both employees and organizations.² There are many aspects of work psychology, including industrial and organizational psychology, and the term has been used for a wide range of topics related to the psychology of work. Since this thesis is aimed at showing how a working model can be optimized from an employee-demand perspective, it is important to study and understand the psychological factors that impact the workforce in different ways. Ultimately, the intention is to improve working conditions in a manner that produces outstanding outcomes for both the workforce and the organizations.

Work psychology plays an important role in helping organizations open, and the workforce to have a smooth coming back to work after the pandemic, by understanding psychological demands of the employees. After the pandemic, some employees will be delighted to be at the office, and some may want to keep the ease of working from home. Work psychology can help organizations make better decisions regarding what optimal working models after COVID-19 is.

² Consumer Psychology (2020) – <https://www.emotiv.com/glossary/consumer-psychology/> accessed on: 04.03.2021

4.1 Workforce Psychology

A workforce is a type of social group, regardless of the business area, and so work psychology can help explain people's behavior, thoughts and emotions in relation to their work and workplace. The importance of work psychology lies in the assistance it provides to understanding the factors that affect people in a positive way and how this can be utilized to increase work efficiency as a result. The term "work" is specifically used as an activity a person does to earn a living. The importance of studying work psychology in organizations, especially at crisis times, arises in part from the fact managers can increase employee efficiency at work by applying positive techniques.³

4.1.1 Organizational Psychology

It is important to understand that work psychology goes beyond basic or fundamental psychological research, and that it is an example of applied psychology; that is to say, the study of work psychology has an end-goal of providing practical solutions to real-world problems and improving conditions in the workplace.

When work psychology is discussed, two major terms need to be focused on. The first is FMJ, or "fitting the man to the job", and the second is FJM, or "fitting the job to the man". These concepts were introduced by Alec Rodger in the 1950s. Rodger was a British occupational psychologist who published on many aspects of work psychology. His⁴ book *The Seven Point Plan* was highly influential for the field of occupational assessment, and in it he discusses FMJ and FJM. Based on Rodger's definition, FMJ happens through work guidance, personnel selection and training for workforce developments, whereas in FJM, the employer fits the job to the workforce through designing methods, discussing the working conditions and social rewarding. Although Rodger was the first person to define these two concepts, the footprints of these working traditions can be traced back to earlier times. A good example is the change in working needs during and after the world wars. The National Institute of Industrial Psychology (NIIP), founded in 1921, was responsible for matching people to specific jobs during that period and used personality tests to achieve this.

³ John Arnold, 2005

⁴ Rodger, 1952

Work psychologists were in high demand after the second world war, which is a crucially relevant point for this study due to the pandemic situation we are experiencing as it is clear that behavioral and psychological aspects of the workforce are of particular importance during a time of crisis.

4.1.2 Theory of Work Psychology

A useful psychological theory specifies thoughts, behaviors and emotions that result in essential outcomes. As mentioned above, work psychology and the relationships among the workforce play important roles in determining the efficacy of different working models. The next step is to decide what theoretical elements are essential for this study, how these theories should be defined, and how they should be put into working practice. This section will discuss relevant psychological theories of human behavior and how these relate to work.

For defining the theoretical elements, this study uses what John Arnold⁵ proposed as the four most important elements of theoretical psychology. Figure 1 shows the structure of psychological theory he presented:

⁵ Arnold, 2005

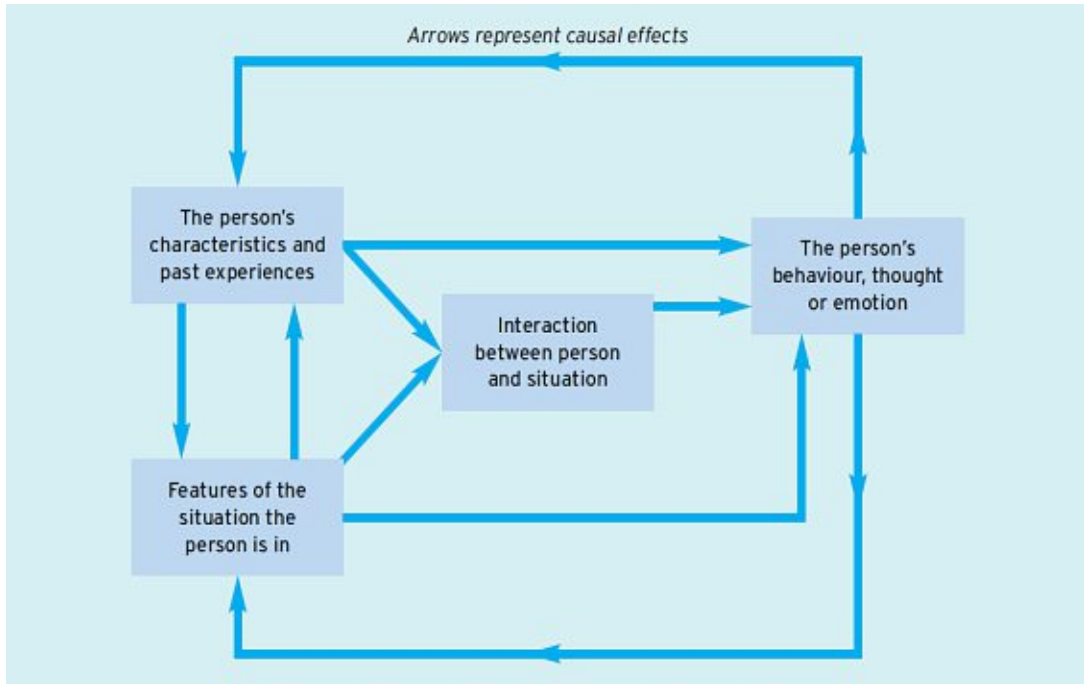


Figure 1. Psychological Structure⁶

Since this study analyzes human beings, it is important to appreciate the complexity of each individual's behavior. It is unlikely, and probably undesirable, that a working model could be produced that would generate the same (or even extremely similar) results when applied to different groups of workers. In addition to the numerous differences, large and small, between workplaces, every individual also has a different background and unique characteristics. However, by being aware of such differences, this thesis seeks to consider the complexity of these variable factors when analyzing the results from the working model.

⁶ Arnold, 2005

Based on Figure 1, Figure 2 lays out the four elements of Arnold’s structure of psychological theory in a sequential order that will assist in the discussion below:

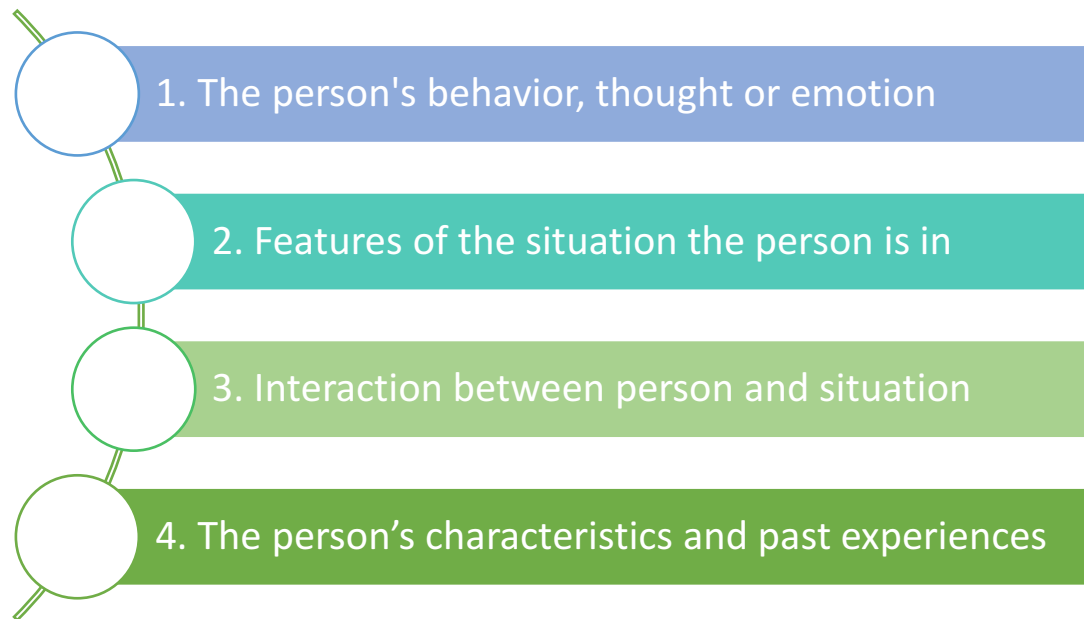


Figure 2. *Psychological Theory Elements*⁷

To make Arnold’s structure of psychological theory more tangible, consider the issue of punctuality when arriving at work. Based on the first element of this theory – the person’s behavior – an individual who has good time-management is more likely to arrive at work on time, whereas someone who has difficulty with time-management might often be late for work and their other appointments throughout the day. This is an example of considering only one element, which in this case is the theory that punctuality or lateness depends on individual’s character and behavior. But it is not as simple as stating that a person is either well organized in their life or not, as every occurrence is the result of more complex elements.

Continuing with the example of being punctual or arriving late at work, it is time to introduce the second element of Arnold’s structure of psychological theory – the features of the situation the person is in. So far, there are two types of employees: one who shows up at work on time, and the other who is often late to work, and only their behavior has been used to reach a conclusion. Now imagine the situation involves another impact factor, such as these two people are planning to go to work on a snowy

⁷ Arnold, 2005

day with obstacles like snowdrifts in their way. Different people react differently to situational factors, and it is possible that someone who is always punctual is more likely to handle the situation better and will still manage to get to work on time, whereas the second person might be more affected by this situational element and could arrive at work even later than usual.

This situational factor has a parallel effect on the third element of Arnold's structure, which is the interaction between the person and the situation, and the result, of course, influences the person's behavior, thoughts or emotions. These elements are so interrelated that it appears difficult to create an all-encompassing formula for how humans react to various factors. The last of Arnold's psychological elements is the person's characteristics and past experiences. In this case, employees might have experienced certain punishments as result of being late and so changed their mindset to become more punctual. There are many more connections between these elements, as well as other factors to consider, such as job satisfaction, distance to work, and so forth. But the most important point to take from this discussion is that there are a vast number of features, characteristics or situational circumstances that influence punctuality at work, and that this was only one small example. This study necessarily becomes more complex when the discussion focuses on people's ways of working during the Covid-19 pandemic and their reaction to models that attempt to address its wide-ranging and deeply felt consequences.

4.2 Subjectivity vs Objectivity

This section addresses how to face the multiplicity of work psychology theories. As discussed above, various interrelated factors influence human behavior in certain frameworks, such as work environments. The range of work psychology theories can be daunting, and even contradictory, when it comes to conducting research in the area. The most fundamental polarity has been discussed by Easterby-Smith et al⁸, who describe two distinct views but, ultimately, conclude that today's research needs to involve, at least partially, both. The first view is called Positivism, which insists on the objectivity of our social world and believes that research should be conducted using

⁸ Easterby-Smith et al, 2002

objective methods rather than subjective ones. In these types of research, the data is quantitative and numerical.

The opposite psychological theory, Subjectivity, proposes that understanding the relative nature of an individual's perceptions is the key to effective research into human behavior and activity. In these types of studies, interpretations of people's thoughts, behavior and social interactions are central. The research focus here is not measuring how often people display certain behaviors but why people react in such ways. The resulting data can be more complicated to study than quantitative data, but it can also be more interesting and multi-faceted. Normally, theories of subjectivity and objectivity assign a lot of significance to why humans act in certain ways.⁹

Based on the discussion above, this thesis will pursue its goal by implementing the subjective approach which is based on empirical evidence of verifying the reality of a claim. This approach will be implemented by running surveys containing questions which will support both topics in work psychology and optimal working models.

⁹ Easterby-Smith et al, 2002

5 Connection between work psychology and a successful working model:

As mentioned earlier, workplace psychology is the study of day-to-day individual and collective human behavior in organizations and the workplace to understand how work behavior can be influenced, changed and improved to benefit both employees and organizations.¹⁰ The goal of this chapter is to derive some key factors of work psychology that are beneficial for the workforce and the organizations in order to optimize the work output. The optimized working model, which will be presented later in this thesis, will be based on the defined criteria from work psychology with a positive impact on the work result. The questions here are: what is the connection between work psychology and a successful work model? What are the key factors to consider when shaping an optimized working model during and beyond the pandemic?

5.1 Identifying psychological factors affecting workforce performance

5.1.1 Psychological impact of stress:

For many individuals stress seems to be an unavoidable component of everyday life. Human beings experience stress in different environments. Stress at work can come from dealing with a difficult manager or colleagues, poor working conditions, exhausting meetings and excessive workloads. No matter in what form, workplace stress can be extremely harmful for our physical and emotional health.¹¹ In order to study and understand how to manage workplace stress, the following chapters provide detailed analyses of workplace stress and how it can be mitigated. As such, it is important to include the factors that avoid or control stress in the optimized model of working, which will be presented in subsequent chapters of this thesis.

Data show that nearly 10 percent of the United Kingdom's GDP is lost to work related stress, which comes in the forms of sick leave, reduced productivity, low workforce motivation. In turn, this generates additional costs, such as recruitment and medical costs for the workforces impacted.¹²

¹⁰ Consumer Psychology (2020) – <https://www.emotiv.com> accessed on: 04.03.2021

¹¹ Cooper CL and Marshall J. 1976

¹² John Arnold, 2005

5.1.2 What is workplace stress?

The word stress is derived from the Latin word “stringere”, meaning *to draw tight*.¹³

The meaning of the word itself indicates how intense the impact of stress can be. There are many different aspects to the word “stress”, but the relevant aspect for this study is the stress caused by the interaction between an individual and their surrounding environment.

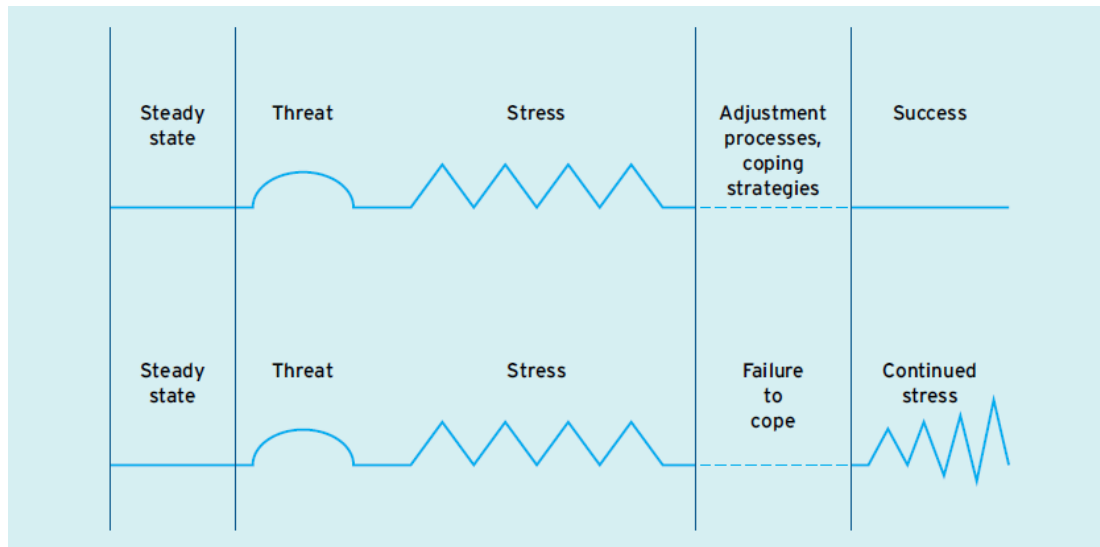


Figure 3. Stress in the workplace¹⁴

Figure 3 presents how an individual goes through stress and what they experience as the result of the threat. A “steady state” of an individual is considered, as shown in the left side of the figure. This individual is then exposed to a threat, which could be anything from being late at work due to traffic, to too many meetings and no breaks during work. As a result of this threat, the individual experiences stress. If this stress is not successfully managed, the individual will go through continued stress, which could possibly result in one of the critical states mentioned earlier, such as sick leave, reduced productivity and low workforce motivation. All these negative reactions are cost driven for the organization and, of course, psychologically dangerous for the employee. As mentioned before, stress not only causes serious health issues for the workforce, but also generates massive costs for the organizations. It is reported that “workplace stress” is the biggest cause of absence in the UK workforce.¹⁵

¹³ John Arnold, 2005

¹⁴ Arnold, 2005

¹⁵ Arnold, 2005: 420

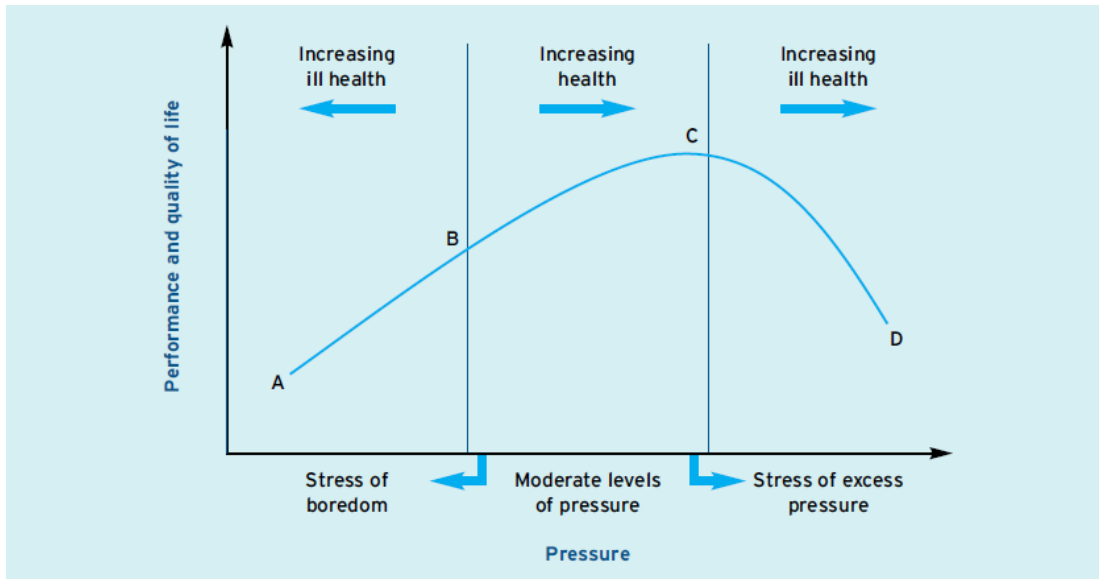


Figure 4. Medical extension of Yerkes-Dodson Law¹⁶

Figure 4 illustrates how various levels of pressure caused by stress can impact a person's performance and quality of life.¹⁷ The level of performance drastically drops off when individuals experience excessive stress. As seen in figure 4, point A to B shows how the stress of boredom increases ill health. On the contrary, when pressure is on its moderate level, as in B to C, the health is increasing. When the stress caused by excess pressure increases, the ill health increases again as shown from C to D. In 2002, the CBI¹⁸ reported that absences caused by stress averaged 7.8 days per employee, at a probable cost to British business of approximately 16 billion Euros¹⁹. As mentioned above, there many types of work stress and the figure below presents some examples.

¹⁶ Arnold, 2005: 394

¹⁷ Arnold, 2005

¹⁸ Arnold 2005: 420

¹⁹ Arnold, 2005

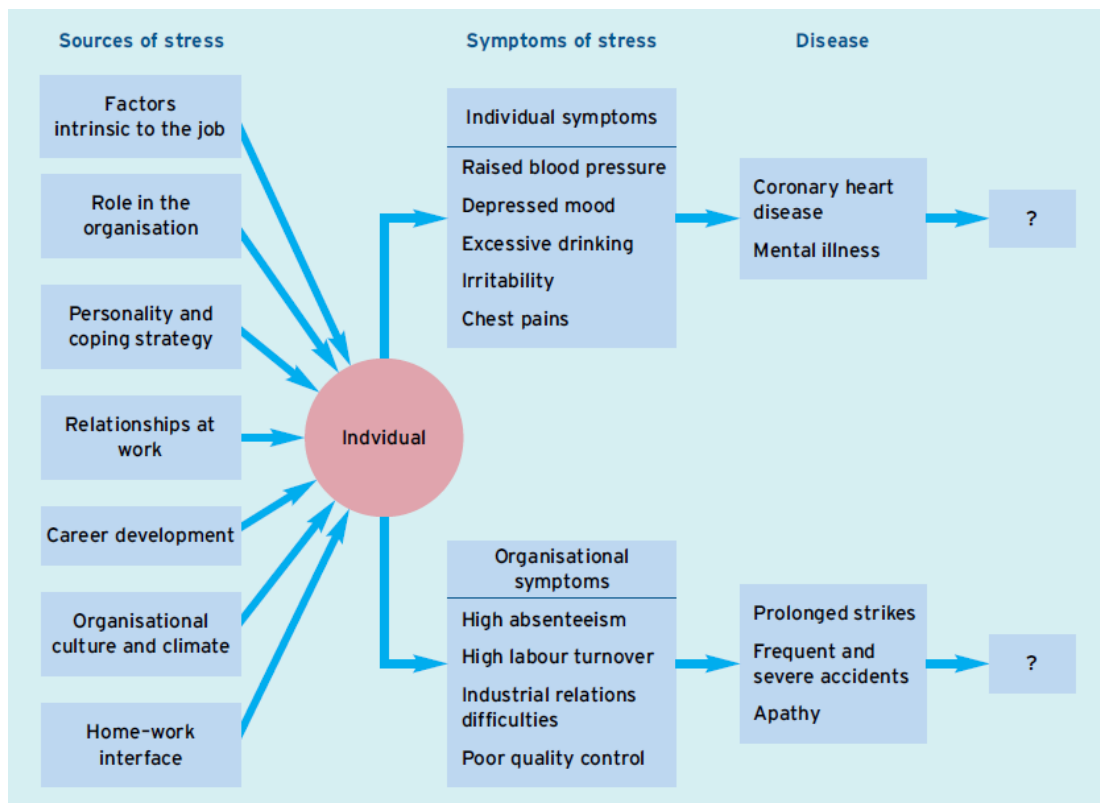


Figure 5. Dynamics of work stress²⁰

As seen in figure 5, Arnold presents sources of stress and the symptoms of them resulting in future diseases. The list above only carries the psychological aspects of stress sources which are of great importance but since this study is a mix approach and in order to cover some physical aspects of working environment, some major sources of stress are taken from the seven stress-sources proposed by Cooper and Sutherland²¹. These sources will be used as a base for evaluating the most beneficial working model. Ideally, the chosen working model will be the one with lower stress levels. It is important to understand that it is almost impossible to set an environment in which stress level is zero, but it is crucial to develop a model in which stress is manageable by the workforce.

²⁰ Arnold 2005: 396

²¹ Sutherland and Cooper, 2000

Along with the mentioned stress sources in figure 5, following are the major sources of stress identified by Cooper and Sutherland²²:

- Poor working conditions
- Long hours of working
- Long commute to/from work.
- Work overload
- Numerous meetings
- Physical surroundings
- Noise
- Lighting
- Working infrastructure²³

The important question here is how an optimized working model could lower stress levels and eventually result in better outcomes. The next chapter of this thesis will discuss how working from home can reduce stress levels by a considerable amount.

5.1.3 How does WFH reduce stress?

When considering the sources of stress discussed in the previous section, WFH can be a less stressful way of working in many aspects. A long commute to and from work is one of the main causes of work-related stress. WFH contributes to lower overall levels of work-related stress by saving the time and energy spent commuting. Another reason why WFH may constitute a less stressful working model is its potential to be a quieter environment. This depends on the specific circumstances of the workplace and the domestic environment, of course, but in open-plan offices, noise was an expected part of everyday working conditions. Maintaining focus can be a challenge in an open-plan office and so the growth of meetings, workshops and training events that can be attended virtually from home allows for the possibility of a quieter and less stressful working experience.

²² Sutherland and Cooper, 2000

²³ Arnold, 2005

In a survey²⁴ on noisy workplaces done by Sara Bean, over half (52%) of workers reported that they are interrupted by noise distractions more than five times in a working day. 17% of those surveyed stated that noise interruptions happened more than 10 times a day. The Remark Group²⁵, supported by environmental psychologist and workplace strategist Dr Nigel Oseland, found that 44% of respondents experienced negative impact on their work due to noise in the workplace. 40% of the respondents also mentioned that noise caused them to feel stressed at work. This report illustrates how workplace noise is a serious issue for many people and negatively impacts on their work. While a workforce may not have much control over noise at work, they are more likely to be able to manage environmental noise at home. This depends on domestic arrangements, such as the size of the worker's family, the space available to them, whether children are present and being home-schooled, and so forth, but generally speaking the number of people in a domestic residence is likely to be fewer than the number of colleagues in most offices. Dr Oseland notes that noise disturbance consistently features in the top three factors that affect workforce wellbeing, and therefore it needs serious attention.²⁶

All the above-mentioned studies indicate that occupational noise is a topic of concern for employees and a cause of stress that results in poor outcomes for work. If by simply changing the above-mentioned factors – long commuting durations and workplace noise – work stress can be reduced, then WFH is beneficial and should result in better working conditions. But as mentioned earlier, stress is only one of many psychological impacts on the workforce. In the following section, this thesis will discuss a second psychological factor – social isolation – and its impact on work.

²⁴ <https://workplaceinsight.net/>

²⁵ Noise and wellbeing at work survey, Oseland 2019

²⁶ Noise and wellbeing at work survey, Oseland 2019

5.2 Psychological impact of social isolation:

In the African Bantu language, the word “ubuntu” means that a person becomes a person only through other people²⁷. Humans are social animals and our brains are geared towards interaction with other people.²⁸

Although social isolation has become an increasingly discussed topic due to the pandemic, it has long been researched as a potential disadvantage of teleworking, even before the Covid-19 outbreak. Huws²⁹ ran a survey regarding social interactions in the United Kingdom in 1984 and reported that 60 percent of the teleworkers identified social isolation as the greatest disadvantage of WFH. Sandi Mann³⁰ conducted an interesting study that interviewed a group of full-time employees for 20 minutes to ask about their psychological status while working remotely. The following figure presents the results of the questioned topics. The second row underlines the importance of the lack of physical interaction when working remotely. According to Mann, a number of teleworkers stated that they went out shopping just to have face-to-face interaction with another person.

	Office-working	Teleworking
Stress	83%	67%
Loneliness	0	67%
Enjoyment	100%	100%
Irritability	83%	100%
Worry	17%	67%
Resentment	67%	67%
Guilt	50%	67%
Frustration	100%	100%

Figure 6. The percentage of the teleworking and office-working participants who acknowledged experiencing the emotions specified in the questions³¹

Lack of social interaction does not only result in loneliness but also in being demotivated and stressed. The solution for many organizations is replacing face-to-face interactions in person with online meetings and video calls. These virtual

²⁷ Interview of Desmond Tutu, New Scientist, April 2006

²⁸ Ritta Hari 2009)

²⁹ Huws, 1984

³⁰ Sandi Mann, 2003

³¹ Sandi Mann 2003: 202

interactions have helped organizations to keep functioning to a great extent, but are they really a replacement for all the interactions human beings need? An interesting study by Stanford³² analyzes an issue called “Zoom fatigue” in WFH. Based on this article, the four following reasons are why Zoom, or other video conferencing applications, cause fatigue and stress in the workforce:

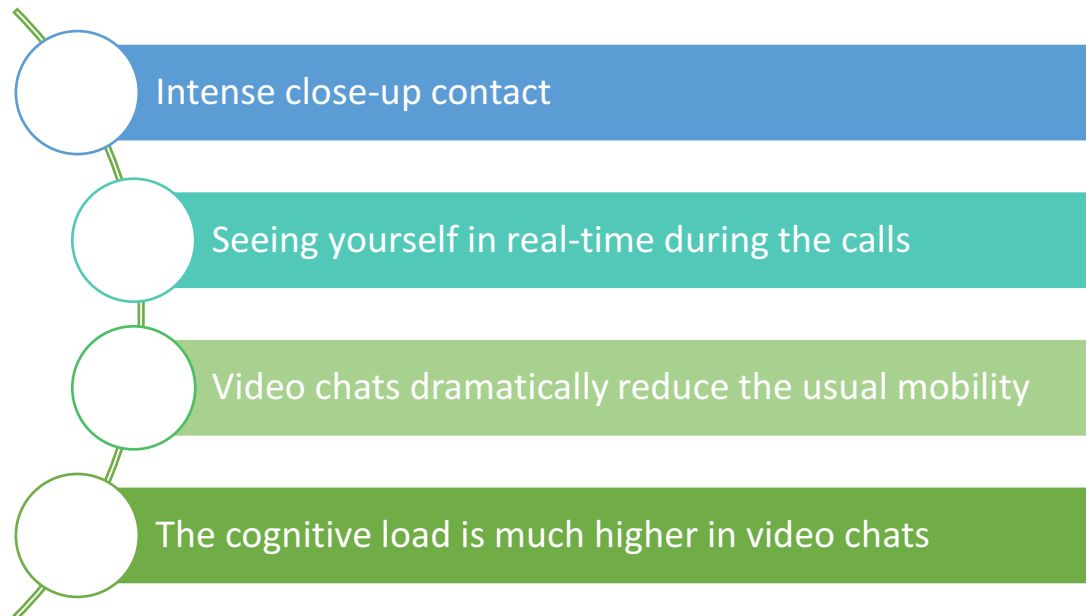


Figure 7. Four reasons for Zoom fatigue³³

Ramachandran³⁴ discusses that both the eye contact and the size of the faces on the screen are unnatural. In real life-situation, the participants would normally only look at the speaker, whereas in video calls everyone is looking at each other at the same time. When the amount of eye-contact increases, the social anxiety also increases, especially for the speaker. Generally, the brain interprets any close object as a trigger for an intense reaction, especially if that close object is another person. Virtual images, such as video calls, act on the human brain in the same manner as physical encounters, and so close-up images on the screen are interpreted as entering our personal space, which can result in anxiety.

³² Vignesh Ramachandran (2021): Stanford researchers identify four causes for ‘Zoom fatigue’ and their simple fixes, <https://news.stanford.edu/2021/02/23/four-causes-zoom-fatigue-solutions>, accessed on April 26 , 2021

³³ Author’s chart

³⁴ Vignesh Ramachandran (2021): Stanford researchers identify four causes for ‘Zoom fatigue’ and their simple fixes, <https://news.stanford.edu/2021/02/23/four-causes-zoom-fatigue-solutions>, accessed on April 26 , 2021

Professor Jeremy Bailenson, in an experiment in the Stanford Virtual Human³⁵ Interaction Lab, examined the psychological consequences on the WFH workforce from low social interactions and high virtual connections. He reported that seeing yourself during all the video calls is like holding a mirror in front of your face wherever you go. He believes that when people watch themselves all the time, they will get more self-critical and this will result in increased anxiety at the end of the working day. He concludes that the psychological effect of a lack of social interaction is very negative for human beings, and we tend to seek real-life interactions for a healthier well-being.

As a conclusion, although the virtual interaction is benefitting organizations during the pandemic in so many ways but they are no replacement for real face to face interactions and despite the possibility of having virtual, most workforces report lack of social contact resulting in loneliness and stress.

³⁵ Stanford Virtual Human Interaction Lab, 2021

6 Different Ways of Working:

This chapter discusses two different ways of working: working in corporate offices and working from home (WFH). Over time, both modes of working have undergone considerable changes, particularly due to technological advances. The chapter provides a deeper insight into new ways of working due to the current Covid-19 situation and discusses the advantages and disadvantages of both working models using existing studies. The psychological perspective of employee demands is considered as a base factor through all the chapter.

6.1 From Traditional offices to digital corporate offices:

The traditional way of working in an office starts on a Monday morning and continues all through the week till Friday afternoon, generally comprising 35-40 weekly working hours. In this working model, the employee is present at the office during all their working hours. In older models of working from the office, every employee had their own dedicated desk, although this practice has been decreasing for some years with the arrival of hot-desking and agile working.



Figure 8. First office building in London in 1726³⁶

Figure 8 shows the world's first purpose-built office. This building is located in London and is known as Old Admiralty Office. There is evidence that the first offices

³⁶ <https://k2space.co.uk/knowledge/history-of-office-design/> – accessed on 27.2.2021

originated in ancient Rome as spaces where official work was done, but Old Admiralty Office was the first dedicated office building.

Time and technology have changed workplaces in a drastic way. As more focus is centered on the workforce, workplaces are going under a significant change. Based on *the workplace leader's handbook of the digital tools of tomorrow*³⁷, offices no longer serve only the need of a place for the workforce to perform their duties. It is nowadays important to make offices interesting enough to retain the best employees and empower them to be productive. This chapter will discuss the development from historical office buildings to developed smart offices.

6.2 Digital transformation in corporate real estate

As mentioned, offices are no longer only a physical space for working. Offices are also data-driven and innovative workplaces for talented minds to create an optimal outcome that boosts the businesses. A digitalization study³⁸ of the real estate sector in Switzerland of 160 companies reported that 87% of respondents in the sector foresee an opportunity to increase the efficiency of their core processes by using digital technologies. 78% of the respondents³⁹ expect faster and more data-based decision-making.

Since needs and expectations are changing with the rise of technology, smart workplaces offer key elements to generate better results and attract more potential workforces. Andrew Krioukov,⁴⁰ the former CEO of Comfy, presented an interesting hierarchical chart of Real Estate Needs. Based on figure 9, three categories of needs exist for a better workplace:

1. Productivity Needs
2. Space Needs
3. Core Needs

³⁷ workplace leader's handbook of the digital tools of tomorrow, 2020

³⁸ EY: Digitalization Study of the Real Estate Sector in Switzerland, April 2019

³⁹ the workplace leader's handbook of the digital tools of tomorrow, 2020

⁴⁰ the workplace leader's handbook of the digital tools of tomorrow, 2020

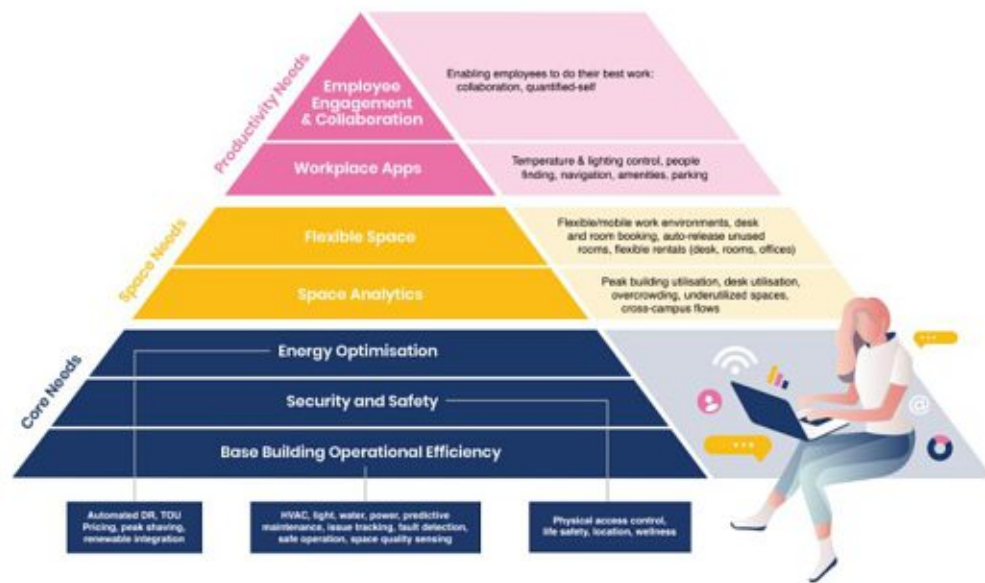


Figure 9. A hierarchy of real estate needs.⁴¹

6.2.1 Productivity Needs

As seen in the first chapter of this thesis, the psychology of the workforce plays an important role in the productivity of the employees. Therefore, special attention should be paid to occupant experience. Harvard University⁴² suggests four key elements for creating a more productive environment at work. These four metrics are: temperature, air quality, office lighting and noise. We have already discussed the negative effects of noise earlier in this study. The Harvard University study⁴³ also shows that the workforce experience 61% higher cognitive scores in building environments with lower CO₂ levels.

6.2.2 Space Needs

Due to technological advances, the space needs for workplaces have gone through drastic changes. With the advent of mobile telecommunications came the need for separate meeting rooms and phone booths and the notion of having fixed desks gave way to shared desks. The narrow halls along office spaces transformed to open spaces where the workforce can have coffee and interact.

⁴¹ Harvard University: Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation and Volatile Organic Compound Exposures in Office Workers, June 2016

⁴² Harvard University: Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation and Volatile Organic Compound Exposures in Office Workers, June 2016

⁴³ Harvard University: Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation and Volatile Organic Compound Exposures in Office Workers, June 2016

Harvard Business Review quotes research performed by the consulting group Emergent Research⁴⁴ that suggests two-thirds of knowledge sharing about work transferred outside office rooms. This is the reasons why having coffee lounges, designed thinking areas and meeting rooms are so important. Annette Kämpf-Dern⁴⁵ reports that up until 2022, the number of co-working spaces is expected to grow at an annual rate of 6% in the U.S. and 13% elsewhere. Europe is forecast to see 23.7 million square meters of flexible space in 2019, which represents an increase of 12%.⁴⁶ The assumption is that many start-up companies will first start using co-working spaces, such as cozy meeting rooms, coffee stations and innovatively designed thinking rooms. Although open-offices have been growing in number over recent years, the current pandemic situation might have long term effects on them due to Covid-related measures.

6.2.3 Core Needs

Core needs are at the base of every organization, and they include physical access control, safety, fire protections, wellness, HVAC, light, water and power systems. Among all the core needs, safety and security are the most important items and every organization should have a special consideration in this regard for its workforce. With the new situation of Covid-19, organizations should pay more attention to the core needs of their employees to ensure their safety and health.

By fulfilling the needs for a better workplace, organizations can achieve their goal of attracting talented and potential workforces for a better result and for a value adding business. Later in this study, more characteristics of an efficient workplace aligned with the selected optimal working model will be discussed.

⁴⁴ Harvard Business Review, Workspaces that move people, 2014

⁴⁵ Harvard Business Review, Workspaces that move people, 2014

⁴⁶ Instant Offices, 2019

6.3 Working from home (WFH)

The history of remote working goes back to 1979 when five IBM companies tried WFH as an experiment.⁴⁷ Many companies have formulated official remote working policies over the last 20 years, and since then the numbers of companies who have adopted WFH models has increased dramatically. Anna Beninger and Nancy Carter⁴⁸ studied 726 high-potential employees – MBA graduates – around the world and found that 81% were working at a firm that offered flexible work arrangements of some kind. While this study was done in 2013, and therefore has no connection with the Covid-19 pandemic, it shows that flexible work options have been common in many organizations for some time. Beninger and Carter⁴⁹ also suggest that the availability of flexible working arrangements is critical for organizations to maximize their talent pool, as they are desired by the majority of employees.

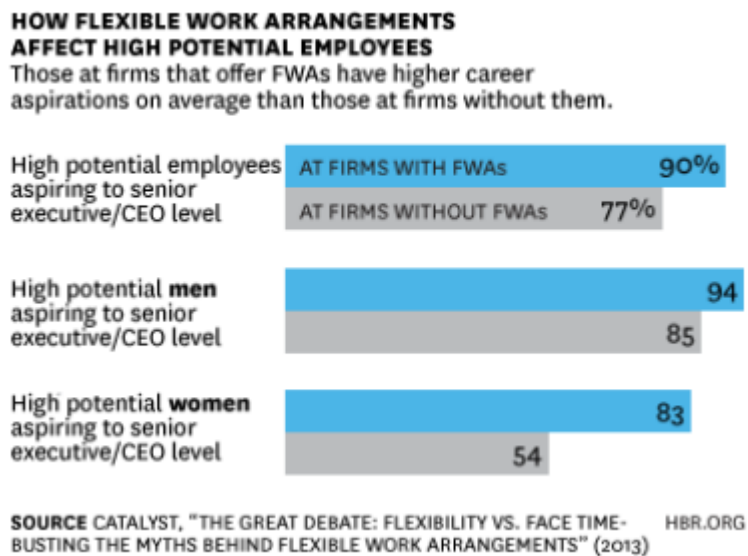


Figure 10. How flexible work arrangements affect high potential employees⁵⁰

Figure 10 illustrates that firms with flexible working arrangements (FWA) have a larger percentage of employees with high career aspirations than firms without FWA. At the businesses studied here, those that offered FWA had 90% of staff with high potential aspiring to be CEOs, while at the business without FWA the figure fell to

⁴⁷ Arnold, 2005
⁴⁸ Anna Beninger and Nancy Carter, 2013
⁴⁹ Anna Beninger and Nancy Carter, 2013
⁵⁰ Anna Beninger and Nancy Carter, 2013

77%. The research also indicates that women are more likely to downsize their career aspirations when at a firm without FWA (Figure 11).

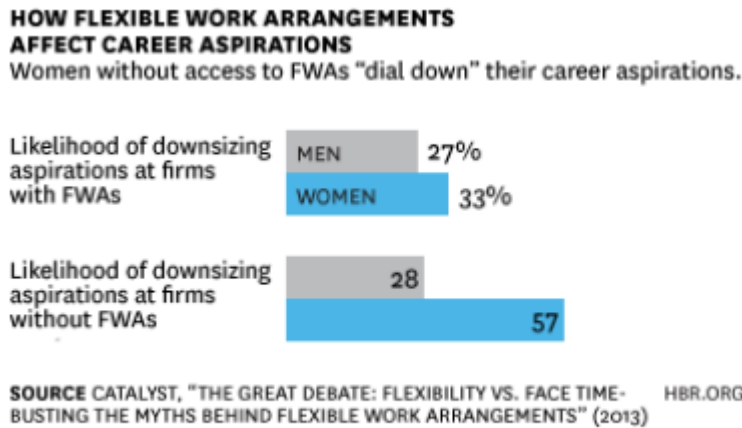


Figure 11. How flexible work arrangements affect career aspirations⁵¹

Figure 11 shows almost no change to the percentage of men likely to downsize their career aspirations if they work at a firm with or without FWA, going from 27% to 28% respectively. However, working at a firm without FWA almost doubles the percentage of women likely to downsize their career aspirations, going from 33% at firms with FWA to 57% at those without.

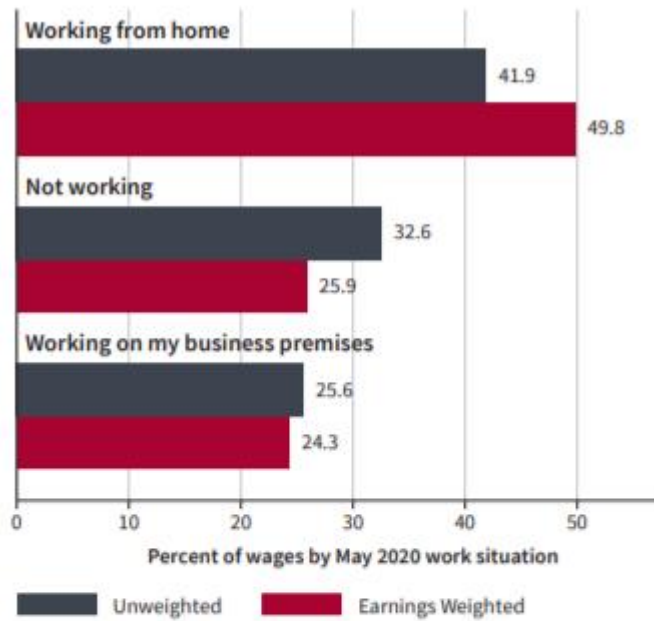
The above discussion shows how critical it is for organizations to offer the possibility of FWA to their employees as it makes the organization an attractive workplace for talents and influences the motivation and output of the workforce. FWA also have a clear effect on gender equality in the workplace, and their implementation encourages a more equal and diverse workforce.

The Stanford Institute for Economic Policy Research⁵² suggests that WFH in the US has jumped 12,000% since January 2020. Although the take-up of WFH has risen sharply due to the Covid-19 pandemic, the concept of a home office is not new. In the following diagram (Figure 12), Barrero and Davis⁵³ illustrate the results of their survey from 21-29 May 2020.

⁵¹ Anna Beninger and Nancy Carter, 2013

⁵² Bloom, 2020

⁵³ Bloom, 2020



Source: Response to the question "Currently (this week) what is your work status?" Response options were "Working on my business premises," "Working from home," "Still employed and paid, but not working," "Unemployed, but expect to be recalled to my previous job," "Unemployed, and do not expect to be recalled to my previous job," and "Not working, and not looking for work."

Data from a survey of 2,500 US residents aged 20 to 64, earning more than \$20,000 per year in 2019 carried out between May 21-29, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.

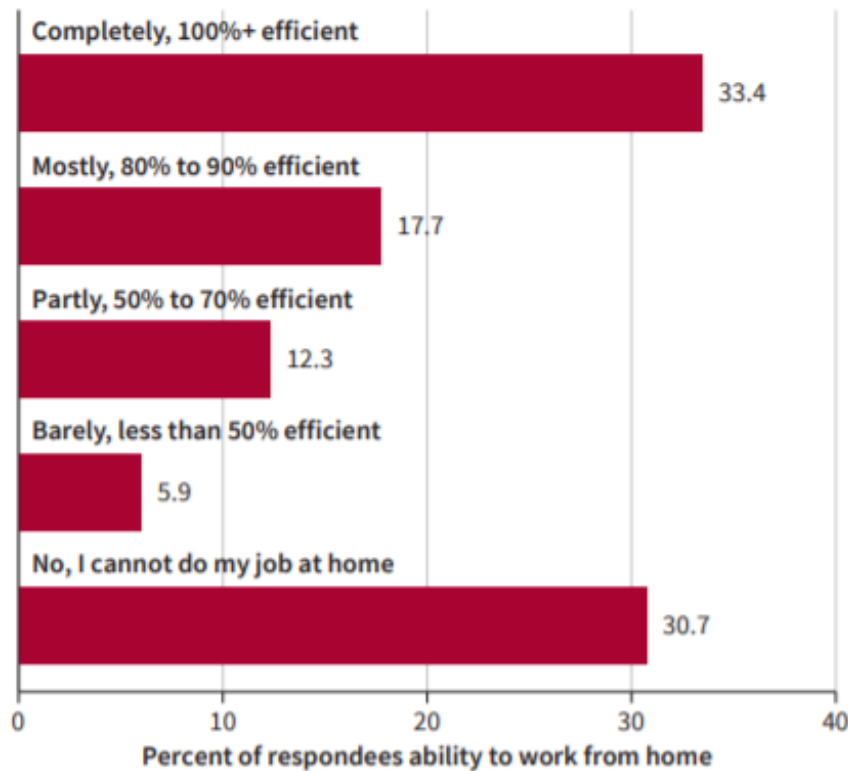
Shares shown weighted by earnings and unweighted (share of workers)

Figure 12. WFH now accounts for over 60% of US economics activity⁵⁴

This survey was carried out on 2,500 US residents aged between 20 to 64 and the results show that the current US economy is largely dependent on WFH, with 42% of respondents working this way. As WFH is now a critical component of everyday working life, questions of how this should be best performed, and the extent to which WFH should continue after the pandemic, need to be investigated.

While it has been shown above that the economy in most places during the pandemic is dependent on WFH, it is important to acknowledge that it is not possible for all jobs to be performed this way.

⁵⁴ Barrero and Davis Survey, 21-29 May 2020. Bloom, 2020



Source: Data from a survey of 2,500 US residents aged 20 to 64, earning more than \$20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.

Figure 13. Not all jobs can be carried out working from home⁵⁵

Figure 13 is taken from the same survey by Barrero and Davis covering 21-29 May 2020⁵⁶, and it reveals that only 51% of the respondents believe they can work from home with an efficiency rate of 80% or higher. This means that WFH for almost half the people surveyed is only partly efficient, barely efficient, or entirely impossible (the latter forming 30% of the workforce questioned). There are many impediments when it comes to WFH, and the following is just a short list:

- Internet connectivity issues
- Lack of necessary technologies
- Lack of office equipment
- Lack of facilities, such as an office room or a separate area to work from

⁵⁵ Barrero and Davis Survey 21-29 May 2020. Bloom, 2020

⁵⁶ Bloom, 2020

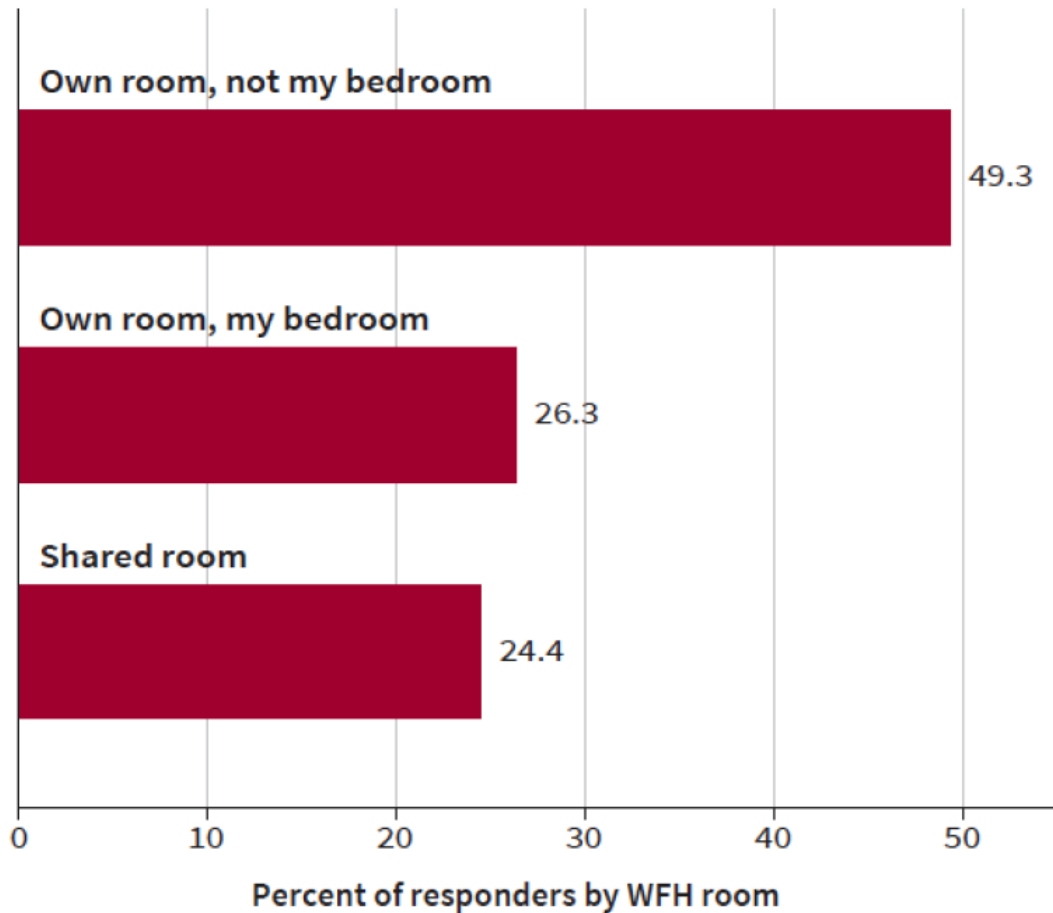


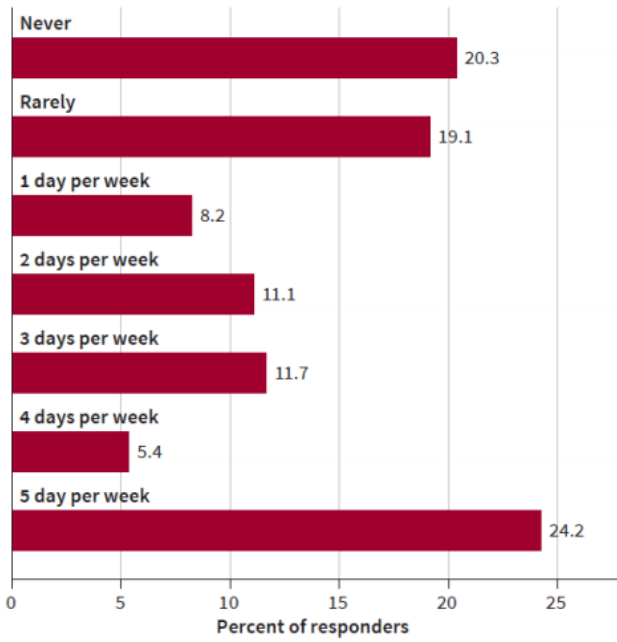
Figure 14. Working from home is challenging for many employees⁵⁷

Figure 14, also from the Barrero and Davis⁵⁸ survey, provides an outlook of how many Americans lack the sufficient facilities to WFH. The graph illustrates that only 49% of the respondents have the advantage of working from a devoted environment as a workplace at home. 26% of the respondents use their bedroom as their home office, and 24% have a shared room to work from.

Since this thesis's focus is on the demands of employees, the following diagram (Figure 15) is of great interest since it records the respondents' preferred ways of working. Bearing in mind that WFH has risen hugely due to the current situation and considering the range of possibilities that people have for WFH, the following figure reveals these employees' preferred working models for after the pandemic.

⁵⁷ Barrero and Davis Survey 21-29 May 2020. Bloom, 2020

⁵⁸ Bloom 2020



Source: Response to the questions: "In 2021+ (after COVID) how often would you like to have paid work days at home?"
 Data from a survey of 2,500 US residents aged 20 to 64, earning more than \$20,000 per year in 2019 carried out between May 21-25, by QuestionPro on behalf of University.
 Sample reweighted to match the Current Population Survey.

Figure 15. Employees demand for WFH after COVID-19 pandemic⁵⁹

The Barrero and Davis⁶⁰ survey shows that 24% of the respondents would prefer to WFH 5 days a week, while 20% percent would prefer to return to the workplace fulltime. The striking range of the views show how differently people have reacted to WFH.

⁵⁹ Barrero and Davis Survey 21-29 May 2020. Bloom, 2020

⁶⁰ Bloom, 2020

Benefits of Working from home:

Over 10,000 Americans aged between 20-64 were surveyed by Barrero, Bloom and Davis regarding their working arrangements.⁶¹ This research, which was done on behalf of Stanford University, suggested that 60 million fewer hours per workday in the US were spent commuting since the Covid-19 pandemic started, and participants were asked how they used the time saved. The survey revealed that American workers devote a third of this saved time to their primary job and more than half of it to other activities, including childcare and chores around the house.

Figure 16 illustrates that more than 35% of this saved time is allocated to working extra hours on the primary job while the second highest category goes to indoor leisure and the third highest category to home improvement and chores. Childcare is also among the four most common activities undertaken with this saved time. The list of activities stands as benefits of WFH and the outcome of this survey clearly illustrates that Americans can save more time by WFH and, as a result, increase their daily activities to create a more productive lifestyle.

⁶¹ Barrero & Bloom & Davis, 2020

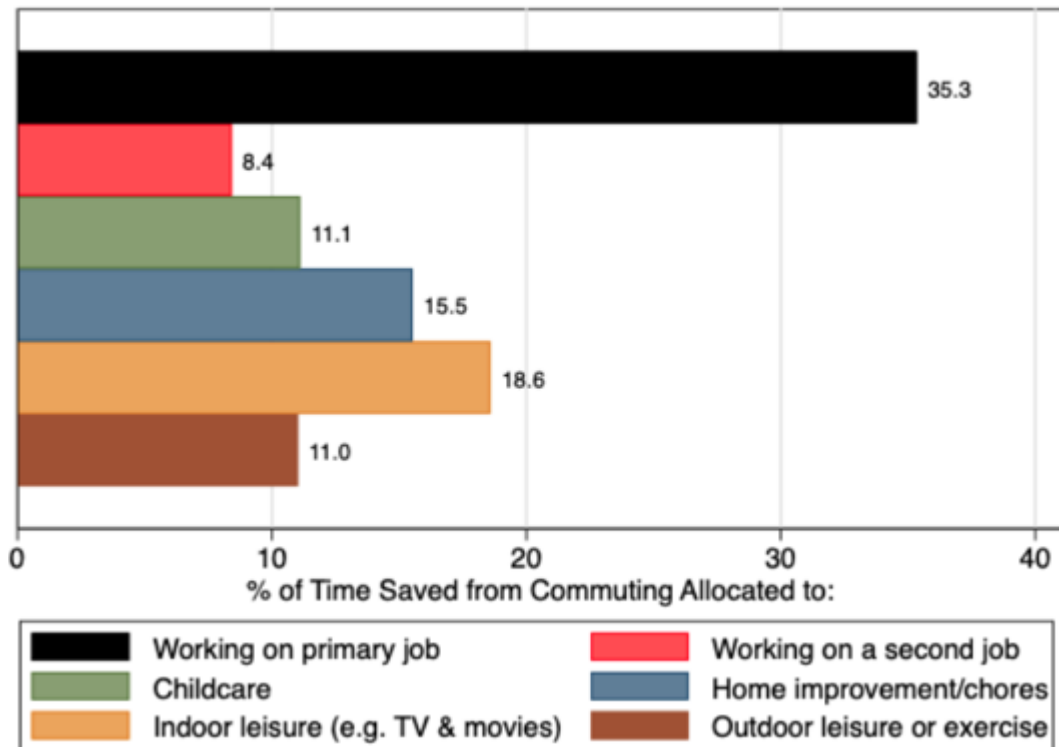


Figure 16. How Americans allocate the saved time to different activities⁶²

Another relevant study on the benefits of WFH comes from Germany. In this research⁶³, 56% of jobs are reported suitable for remote working based on the participants' feedback, and 40% of workers reported WFH in Germany.⁶⁴

⁶² Alipour & Flack & Schüller, 2020

⁶³ Alipour & Flack & Schüller 2020

⁶⁴ From Eurofound Study, 2020 mentioned in Alipour & Flack & Schüller, 2020

Figure 1: Capacity to Work from Home (WFH) by Industry

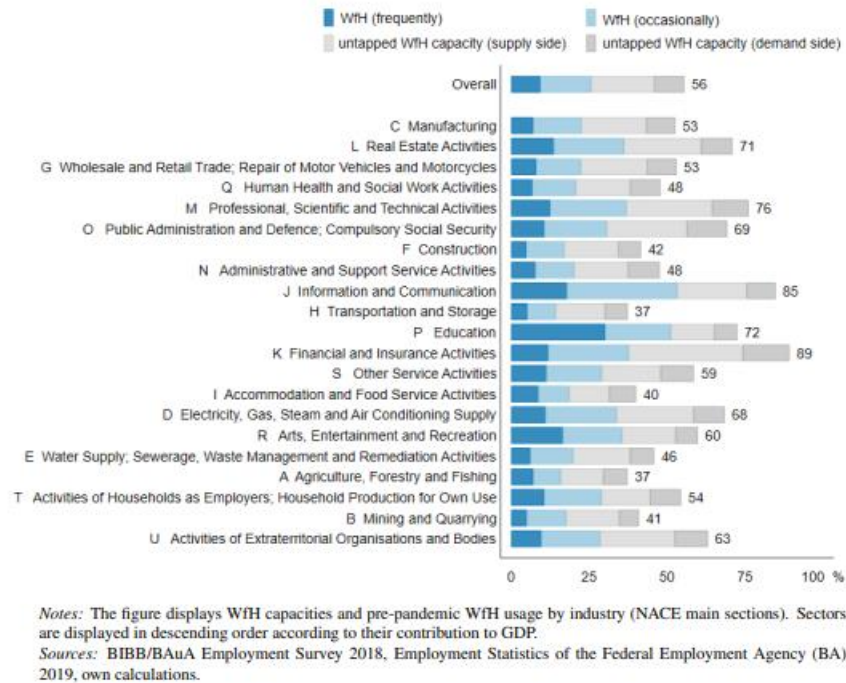


Figure 17. Capacity to work from home⁶⁵

Figure 17⁶⁶ presents that 56% of jobs in Germany can be done remotely. As shown, sectors are listed based on their contribution to GDP and the variation is quite large regarding WFH capacity. Overall, the possibility of WFH for industries in Germany is quite high. The evidence shows that some countries, like Germany, have invested heavily in infrastructure to keep businesses operating from home and give their employees the option of WFH. For this reason, it is likely that WFH will stay as a permanent way of working for many organizations.

⁶⁵ Jean-Victor Alipour, Oliver Flack, Simone Schüller, 2020: Germany’s capacities to work from Home, Munich Society for the promotion of Economics Research, No.8227.

⁶⁶ From Eurofound Study, 2020 mentioned in Alipour & Flack & Schüller 2020

7 Hypotheses development

This thesis has so far gone through an extensive research into different ways of working. Work psychology, organization psychology and different ways of working before and during Covid-19 were used to situate this study in relation to existing knowledge. The literature review considered scholarly material on traditional and non-traditional working models with a focus on the assessment of employee performance across various categories using datasets from several reports and surveys. After a deep dive into the literature review and background studies, many disadvantages of WFH were also uncovered and the negative psychological impacts of the isolation that comes along with working remotely have been discussed.

Taking the literature review that has been presented so far in this study, this thesis suggests that the “hybrid work-model” has gained traction as the most optimized working model that allows the fulfillment of the psychological needs of employees while enabling the best outcomes for the organizations. The background study suggests that most employees choose a balance of WFH and going to the office in a hybrid setting if their safety and health is secured.

In the next chapters, this study will present the survey results, discuss why the hybrid working model is the most suitable working setup and it will present the ways workplaces will be shifting to adapt to new working policies.

8 WFH Survey

As mentioned in the methodology section, the second methodological approach is conducting an anonymized survey among the workforce of various departments of an Austrian financial organization, asking about their working styles, motivations and preferences during and after the pandemic. The aim of this survey is to collect data to gather insights and help identify the most efficient ways of working from the employees' perspective.

A comprehensive questionnaire has been provided to understand the viewpoint of the workforce regarding WFH and their opinions regarding working styles for after the pandemic. The questionnaire contains 6 questions which cover the following topics and it was spread among 120 employees of the advanced analytics departments with an age range of 26 to 45.

- Question 1: Share of teleworking before the pandemic
- Question 2: Benefits of remote working from employee perspective
- Question 3: Disadvantages of working from home
- Question 4: Preferred working model
- Question 5: Desired share of each working model (WFH and WFO)
- Question 6: Advantages of working from the office

This survey helps this thesis achieve its goal, which is to derive and support the thesis hypothesis regarding the most optimal way of working, by combining the learnings from the literature review and the survey results. The next section will present each question separately and will go through an analysis of the achieved results.

8.1 Descriptive Statistics and discussion

8.1.1 Teleworking before COVID-19 breakout

Question 1: On average, how much teleworking have you been doing before the outbreak of COVID-19?

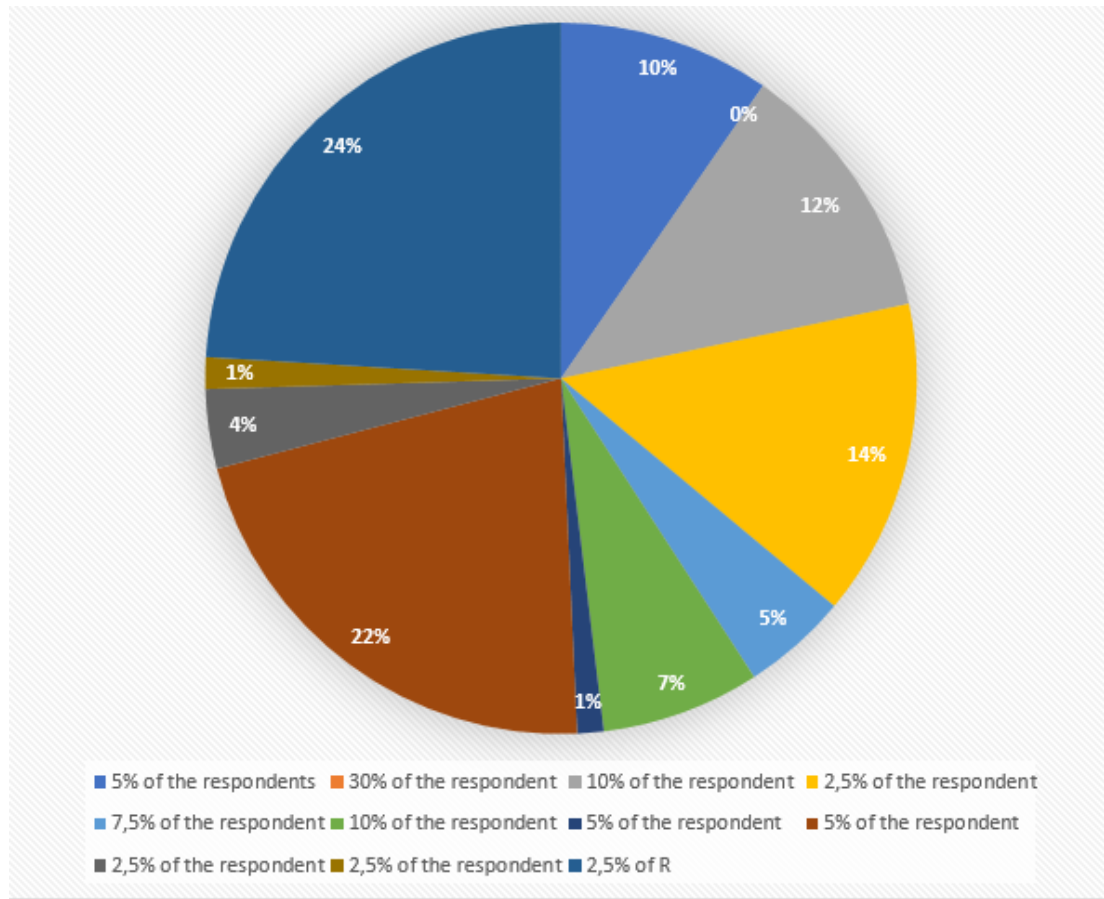


Figure 18.the percentage of teleworking before the pandemic⁶⁷

In order to understand the situation of working before the pandemic, the first question of the survey was: How much teleworking (WFH) were you doing before the pandemic? The interesting point is that there was a wide range of answers from zero percent to 100 percent. But the graph illustrates that the majority of the participants had 0% of WFH before the pandemic. It is to be mentioned that the amount of WFH before the Covid-19 situation was entirely an organizational decision. In various studies presented earlier, many advanced companies in different countries benefited from WFH a great deal even before the pandemic. Understanding the working pattern of employees before the pandemic assists us to understand the culture and background

⁶⁷ Author's own chart

of the organization and will help illuminate the range of changes due to the current pandemic.

8.1.2 Benefits of working from home from employee’s perspective.

Question 2: Top three benefits of working from home from employee’s perspective

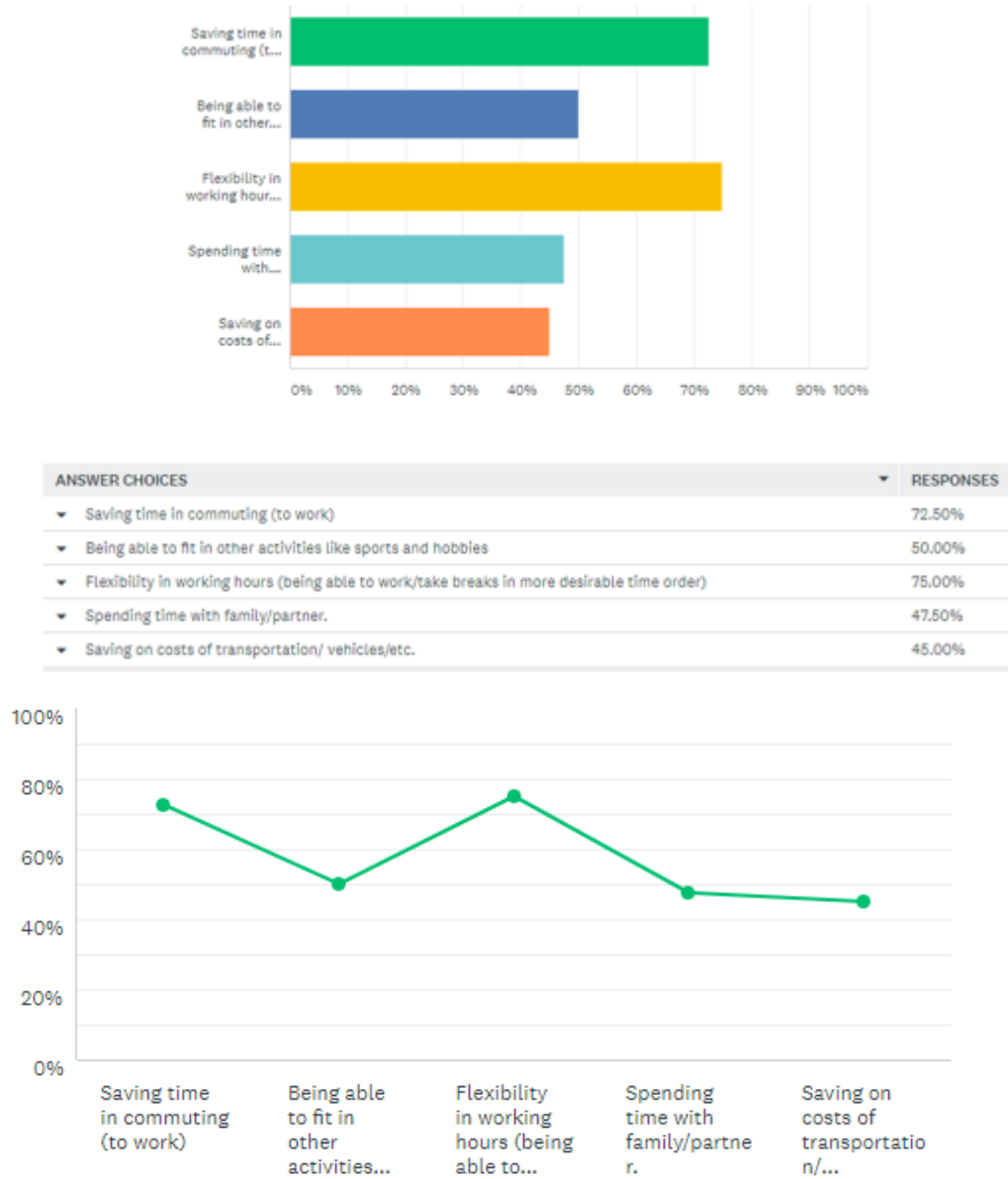


Figure 19. top three benefits of working from home from employee’s perspective⁶⁸

For the second question, the participants were asked to choose three top benefits of WFH that seemed to be the most common topics in the discussion of WFH by many articles. The results were:

⁶⁸ Author’s own chart

1. Saving time from not commuting to work
2. Being able to fit in other activities, such as sports and hobbies
3. Flexibility in working hours (more freedom in choosing when to work and to when take breaks)
4. Spending time with family, partner or friends
5. Saving on costs of transportation

Flexibility in working hours was the highest ranked benefit in this survey. Most respondents find it more beneficial to have flexible working hours. The second highest benefit chosen by the respondents is saving time in commuting. More than 70% of the respondents find it beneficial that they do not have to spend time every day commuting to their workplace. The third highest benefit for the respondents is being able to engage in activities other than work; 50% of employees mentioned that they are very happy that WFH gives them the opportunity to be able to start their hobbies and play sports again. The two last benefits chosen by the respondents are, in order of preference, spending time with family or partner and saving on costs of transportation. It is to be mentioned that saving on costs of transportation is a factor that may differ in different countries. For instance, in Austria where this survey was run, costs for public transportation are affordable, and even considered cheap compared to other countries.

8.1.3 Disadvantages of remote working from employee perspective.

Question 3: Top three disadvantages of remote working from employee perspective.

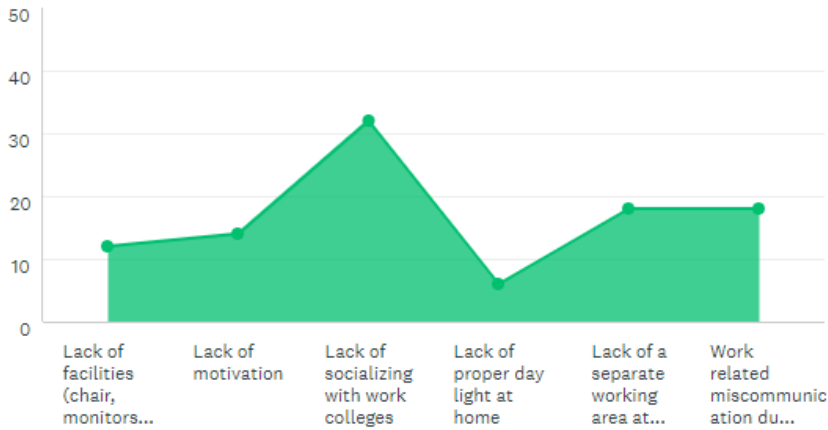


Figure 20. Top three disadvantages of remote working from employee's perspective⁶⁹

The third question of this survey was set on the topic of disadvantages of WFH. The respondents were given five options and they were asked to pick the top three disadvantages of WFH from their perspective. The options were:

1. Lack of facilities (chair, monitors, etc.)
2. Lack of motivation
3. Lack of socializing with work colleges
4. Lacking enough light at home
5. Lacking a separate working area at home (Lack of space)
6. Miscommunication due to lack of face-to-face meetings

As the graph shows, 82% of the respondents pick “Lack of socializing with work colleges” as the first disadvantage of working from home. The prominent number of employees who suffer from lack of socializing with their colleagues due to WFH is an important factor considered in this study’s analysis chapter.

⁶⁹ Author’s own chart

The second disadvantage of WFH chosen by the respondents was the lack of a separate working area, and 46% of the respondents reported this. Earlier in this study, a survey done by Barrero and Davis⁷⁰ between 21-29 May 2020 was presented (figure 14). This study reported the same challenge for American respondents. Bloom⁷¹ reported that 26% of the American respondents use their bedroom as their workplace and 24% of them use a shared room as their work area. Another disadvantage of WFH chosen by the respondents was “work related miscommunication”. 46% of the respondents reported that they have communication difficulties at work due to working remotely. It is also important to highlight that almost 36% of the employees stated they have difficulty motivating themselves when working remotely. Interestingly, a lack of facilities was not among the most common disadvantages and this might be because the surveyed company has provided facilities, such as chairs, monitors and other equipment for their employees to use at home.

⁷⁰ Bloom, 2020

⁷¹ Bloom, 2020

8.1.4 Preferred working model after the pandemic.

Question 4: What is your preferred working model after the pandemic?

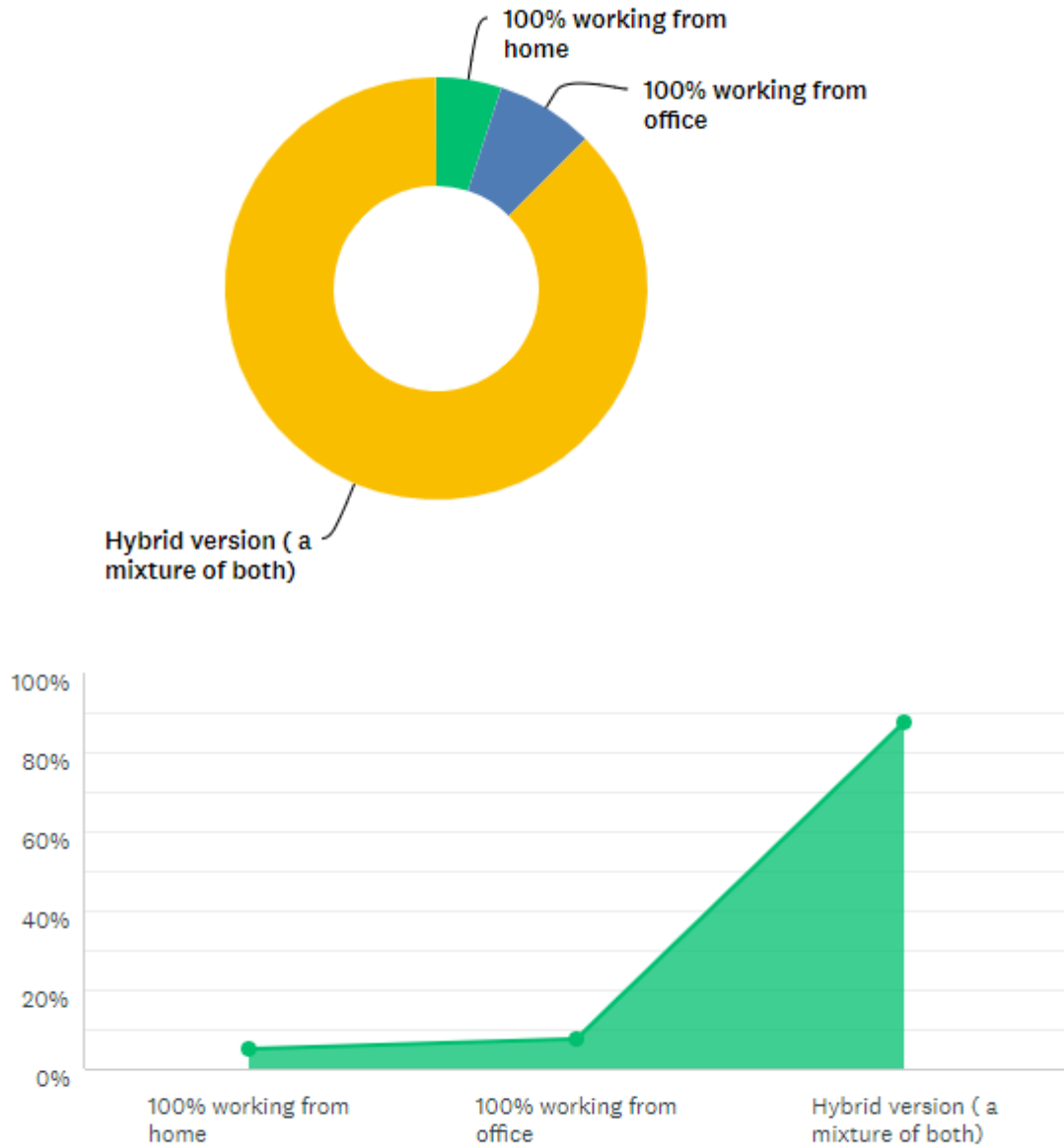


Figure 21. employees desired working model after the pandemic⁷²

Question number 4 is set on the desired working model of the employees after the pandemic. The respondents were given the choice of choosing among the following answers:

- 1) 100% working from home (WFH)

⁷² Author's own chart

- 2) 100% working from office (WFO)
- 3) A hybrid working style (a mixture of both)

More than 90% of the respondents chose a hybrid version and less than 10% went for either 100% home office or 100% working from the office. This straightforward result aligns in its best way with the developed hypothesis of this study. Based on the first part of this thesis, published research strongly suggests that WFH is here to stay, even after the pandemic. On the other hand, studies have shown that the workforce is more motivated and more productive in environments with real interactions with colleagues. We have learned from Professor Jeremy Bailenson, in an experiment in the Stanford Virtual Human Interaction Lab (2021), that video calls are not a completely satisfying replacement for face-to-face meetings, and that the workforce is negatively affected from long-term social isolation.

8.1.5 Desired share of each working model.

Question 5: Desired share of each working model (WFH and WFO).

Question number 5 has been set as a follow-up, addressing the respondents who chose the hybrid model as their desired working model in question 4. This question is set to understand which hybrid model is the most popular one with the respondents.

The following options were offered:

- 1) 50% home office + 50% working from office
- 2) 2 days of home office + 3 days of working at the office
- 3) 3 days of home office +2 days of working at the office

50% of the respondents chose the hybrid model of 2 days of WFH and 3 days of working at the office (option 2). The second highest choice - 40% of the respondents - was the group who chose 3 days of WFH and 2 days of working at the office (option 3), while a very small number of people, 10% of the respondents, picked 50% WFH and 50% working at the office. The results show that most employees are aware of the positive sides of working at the office but still want to have the flexibility of WFH to some extent.

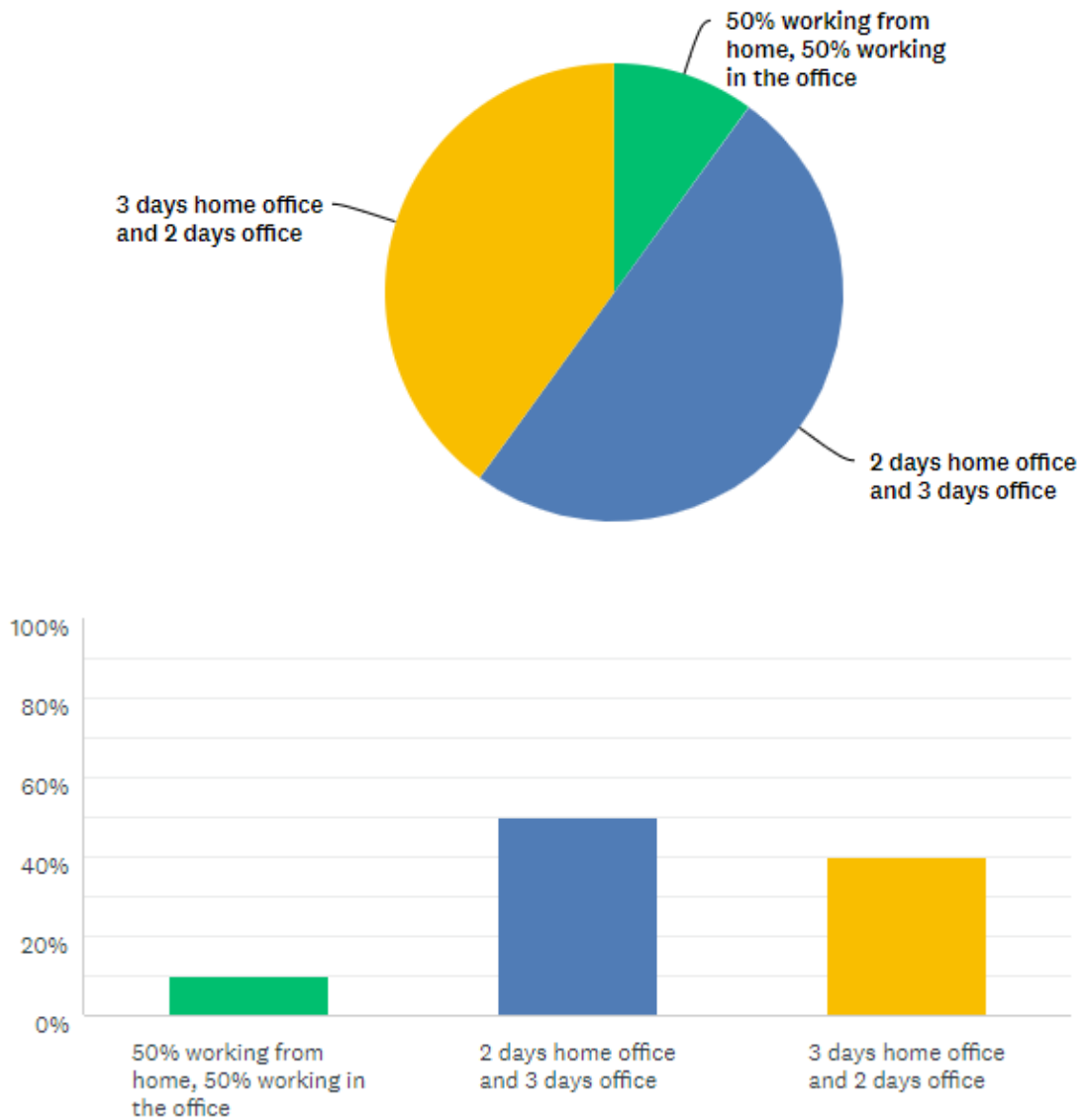


Figure 22. Preferred choice of hybrid working model⁷³

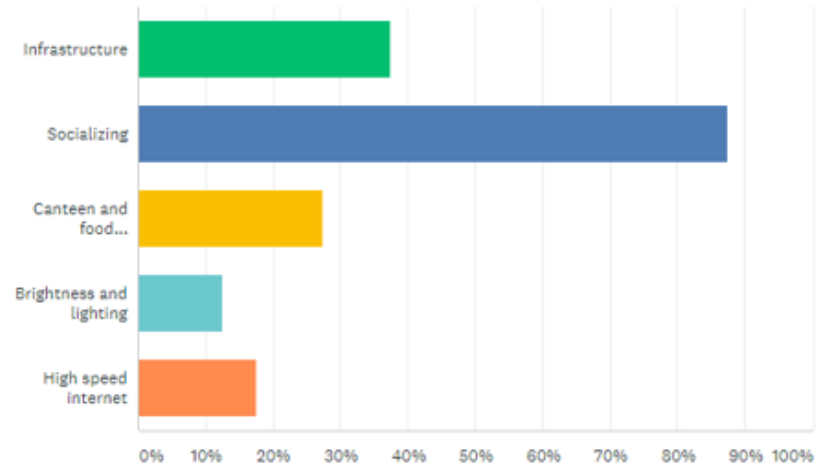
8.1.6 Remote working disadvantages

Question 6: What remote working employees miss the most from working in the office?

The last question of the survey is set around the topic of advantages of working from the office. This question requires the respondents to pick the features that they miss due to working remotely. This question will illustrate the important factors of working at the office and possibly presents the impediments of WFH. This information could

⁷³ Author's own chart

also help to shape suitable solutions to lessen the negative impact of the missing features.



ANSWER CHOICES	RESPONSES
▼ Infrastructure	37.50%
▼ Socializing	87.50%
▼ Canteen and food availability if available	27.50%
▼ Brightness and lighting	12.50%
▼ High speed internet	17.50%
Total Respondents: 40	

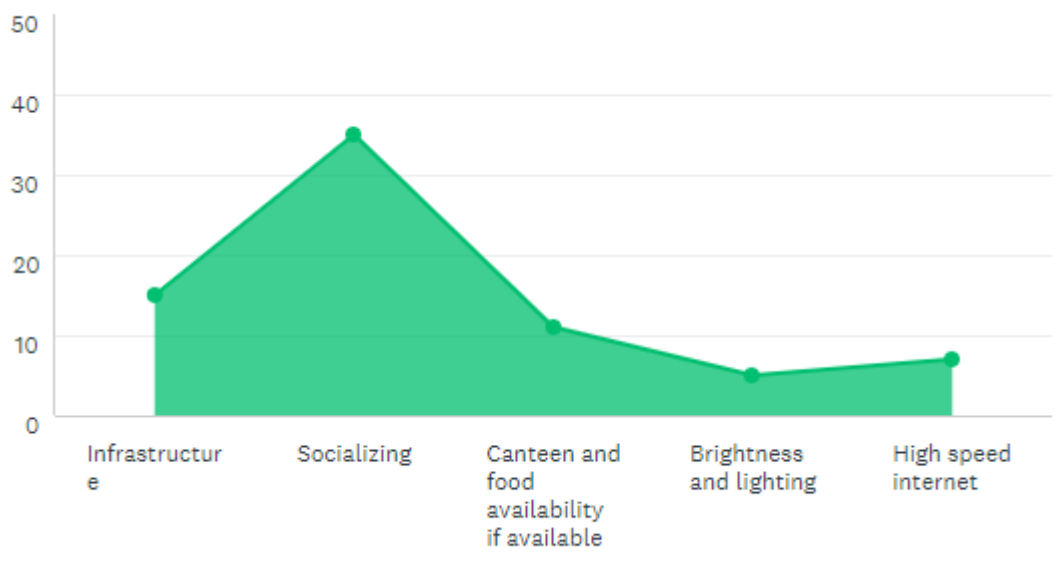


Figure 23. The advantages of working from the office⁷⁴

⁷⁴ Author's own chart

As shown in Figure 23, what most respondents miss from working in the office is the socializing. Many employees have been WFH for more than a year now, limiting their contact to people in their households. As explained by Ramachandran⁷⁵, humans are social animals and lack of social interaction does not only result in loneliness, but also in being demotivated and stressed.

The second most important feature that the respondents miss from working in the office is lack of the infrastructure. As mentioned earlier, in Bloom's survey⁷⁶ only 50% of remote working respondents have their own room to work from, and the rest of the respondents either work from the same room as their bedroom or they work in a shared room.

The sequence of the rest of the features selected by the respondents is as following:

- Canteen food
- High speed internet
- Brightness and lighting

The striking number of employees who mentioned they miss socialization the most from working at the office is proof of the importance of socialization and its impact on the wellbeing of the workforce.

⁷⁵ Ramachandran, 2021

⁷⁶ Bloom, 2020

8.2 SWOT Analysis

In order to visualize the result and to support the discussed hypothesis, this study uses the strategic planning of SWOT analysis technique to define the strengths, weaknesses, opportunities and threats of each working model in this section. SWOT analysis will help the understanding of all the negatives and positives of WFH to decide more clearly which model to choose. Figure 24 shows the base structure of a SWOT analysis.



Figure 24. SWOT analysis standard chart⁷⁷

⁷⁷ Author's own chart

8.2.1 SWOT Analysis for 100% WFH

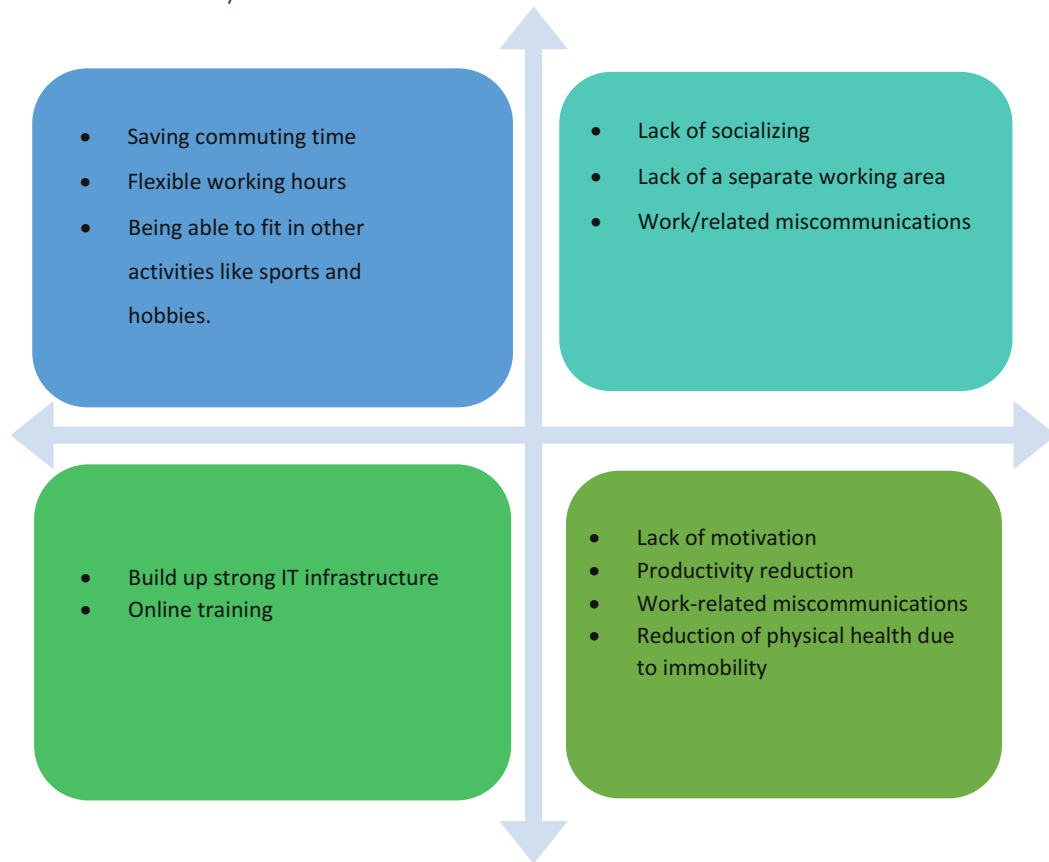


Figure 25. SWOT analysis for WFH ⁷⁸

As shown in figure 25, WFH has many strengths, such as saving commuting time, flexible working hours and being able to perform other activities in the working day, but the weaknesses and the threats are also considerable. The main issues with WFH, based on both the literature review and the survey result, are the lack of motivation and lack of socializing; these have been identified as important negative criteria for the workforce and so eventually a threat for the organizations.

⁷⁸ Author's own chart

8.2.2 SWOT Analysis for 100% WFO

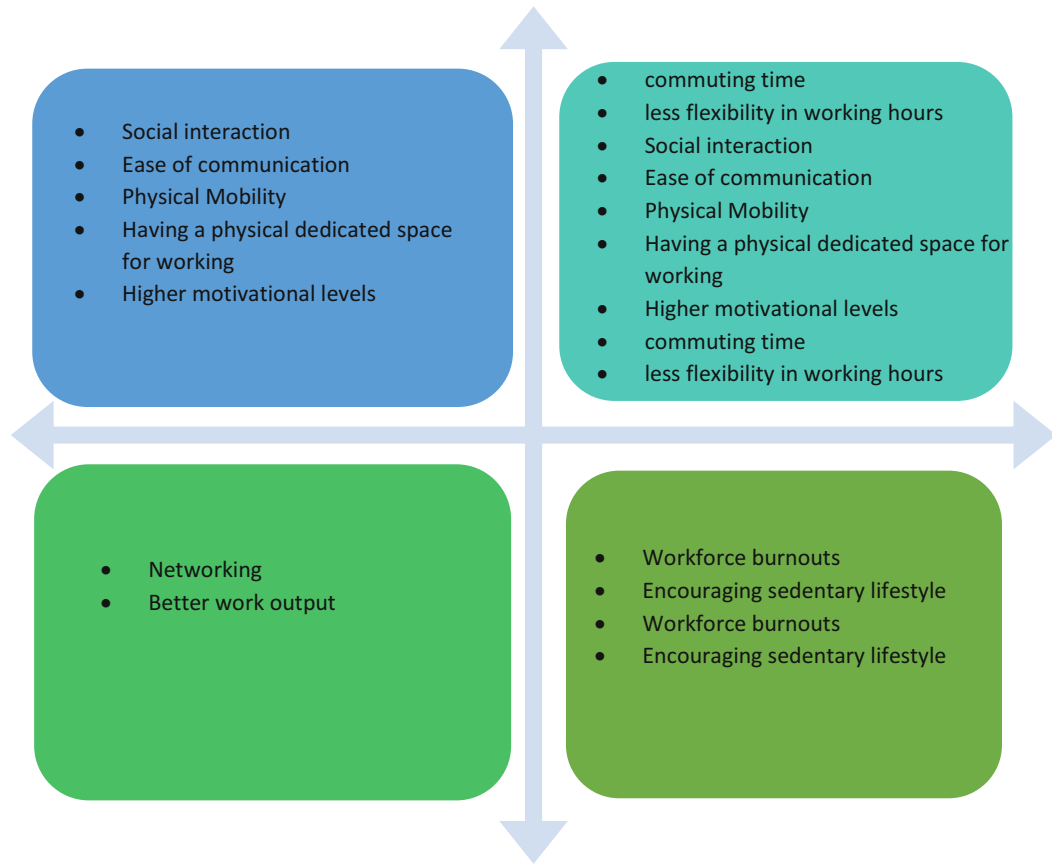


Figure 26. SWOT analysis for WFO⁷⁹

As illustrated in figure 26, working from the office has quite a considerable number of strengths, such as social interaction, ease of communication, physical mobility, having a physical dedicated space for working and higher motivational level. The weaknesses of working from the office, based on both the literature review and the survey results, are the time spent in commuting and less flexibility.

⁷⁹ Author's own chart

8.3 Results Implications

The result of the survey as presented and evaluated by SWOT analysis, implements that hybrid working model is the most optimized working solution considering employee demand perspective for the observed financial institute.

The first implication drawn is flexibility. A lot of things from the pandemic are here to stay and there is a strong requirement to be flexible in working ways, working hours and working styles. Flexibility in general is a prominent feature of hybrid working. In order to name a few examples of this features, consider the possibility of remote working. A hybrid working model will allow employees to work from whichever geographical position they are requiring the security permission of the organization.

Results also applies that most employees require going to the office at least few days a week to keep their social interaction with their colleagues. Based on the survey result, motivation level is at risk of decreasing when working from home and the only way to make going back to the office possible, is by creating a safe and hygienic working space for the workforce.

Based on the survey result, the best working model for the case study of the financial institute, is to implement a hybrid working model which enables the workforce to benefit from the comfort of working from home as well as the interactive environment of an office. This working model should adapt a workplace which creates a safe environment during the pandemic and at the same time provides an interactive space.

In the next section, this study offers a working model solution including the workplace's features that fits to the anticipated hybrid solution not only for the financial institute but for other organizations in which hybrid working model is implemented during the pandemic and beyond.

8.4 Offering Solution

Since hybrid model is shown to be the most efficient working model based on the survey result, offices in future, including our case study office will need to adapt to this working model. The question here is what metrics to consider in the new offices? *The workplace leader's handbook of the digital tools of tomorrow*⁸⁰ advises that CRE professionals should choose the metrics thoughtfully. These metrics should support the KPIs of the business to achieve the desired result. Among these metrics, this study uses the following two metrics presented in Figure 27⁸¹ as the base for setting an optimal working model for the case study:

- 1) Human-Centric Metrics
- 2) Building Operations and Maintenance Metrics



Figure 27. Metrics for Real Estate Management⁸²

⁸⁰ handbook of the digital tools of tomorrow, 2020

⁸¹ handbook of the digital tools of tomorrow, 2020

⁸² The workplace leader's handbook of the digital tools of tomorrow, 2020

8.4.1 The Human-centric Metrics

The human-centric metrics are extremely important for the transition path to the hybrid model, especially during the pandemic since they relate to human well-being and employee health. As presented in the survey result, most of the employees preferred to work in a hybrid model rather than 100% WFH or 100% WFO. Knowing this fact and following the human centric metrics, there are ways to create a safer environment while letting the workforce have controlled amount of presence at the office⁸³. Followings are the solutions offered by this thesis to create a smooth transition to a hybrid model of working.

Promoting hygienic considerations:

Promoting regular hand washing, providing workers, customers and worksite visitors with a place to wash their hands regularly as well as providing the workforce with tissues and other sanitary necessities. Discouraging the use of other employee's belongings such as computer setups, phones, etc. Maintaining routine cleaning policies and disinfecting of surfaces, facilities and other elements of workplaces.

Encourage respiratory etiquette

The organizations should encourage respiratory etiquette, including covering coughs and sneezes. They should also encourage the workforce to practice the culture of staying at home if they witness any sickness signs.

Establishing policies of social distancing

Space management is also an important part of Human-centric metrics. Due to COVID-related measures, a minimum distance of 2.5 meters between employees is advised. Meetings should be held with the hygiene standards being considered. During the pandemic wearing a mask in closed meeting rooms is advised.

⁸³ Guidance on preparing workplaces for COVID-19, 2021

Staff rotation and reduction of the number of employees at once

It is very important that organizations establish alternating days or extra shifts that help decrease the total number of people in a certain working space at a given time. The other way to have control over the situation is to cut on unnecessary business trips and substitute them with virtual communications.

Health consultancy and Stress Management

Providing employees with mental health consultancy during the pandemic is another human-centric metric to be considered. In the chosen optimized model, which is the hybrid model, the workforce should be able to work in an environment in which they can lower the level of stress by having the possibility of working from home at least few days a week. Cutting down on commuting to work everyday lowers the possibility of the stress caused by traffic. It is easier to show up on time for meetings while WFH. As seen in figure 19, the time saved by not commuting everyday was an important factor for the respondents in the survey. As seen, having the possibility of not commuting to work every day not only saves time for the employees, but can also reduce the level of possible stress caused by it. The chain of positive effect caused by not commuting to work every day continues beyond just saving time.

Fulfillment of the workforce psychological needs in Hybrid model offices

As discussed in the work psychology section, the psychological needs of the workforce are a very important factor⁸⁴ to consider. In order to create a workspace with a desirable atmosphere for the psychological health of the employees, this study suggests a few methods to establish a positive environment for the workforce. The first method is to use specific colors to create a positive atmosphere, and so the following section discusses the impact of positive color psychology and some other positive psychological factors in the workplaces (9.5).

⁸⁴ Arnold 2002

Color Psychology in the workplace

Interior color schemes in the workplace contributes a great amount to the mental wellbeing of the workforce when they appear in the office. Color psychology is an easy way to create a more productive environment at work.



Figure 28. Color Psychology in the workplace⁸⁵

Figure 28 shows the four psychological primary colors – red, blue, yellow and green – and the way they affect people⁸⁶. As shown above, red affects the body, blue has impact on the mind, yellow affects self-confidence and green affects the balance between mind, body and emotions. The list of colors and their impact on humans can be extended but it is important to understand how and where to use each of these primary colors.

Color psychology can be applied to many aspects of an office, from the interior to planting and design patterns, to boost the well-being of the employees. For instance, Google has the reputation of creating pleasant working environment by using a variety of colors that mimic nature. The following figure.28 shows Google office in Dublin, Ireland.

⁸⁵ Consumer Psychology (2020) – <https://www.emotiv.com> accessed on: 04.03.2021

⁸⁶ Consumer Psychology (2020) – <https://www.emotiv.com> accessed on: 04.03.2021



Figure 29. Google office in Dublin, Ireland⁸⁷

As mentioned, color psychology plays an important role in mental well-being of the workforce. In the case of figure 29, Google office has used the green color excessively to create an atmosphere to balance mind, body and emotions. There is no doubt that affecting the employees with positive color psychology is one of many ways to create a more desirable workplace for the employees.

Empowering social interaction by creative office spaces, taking Covid-19 measurements into consideration

As discussed earlier in figure 2, based on Arnold's structure of psychological theory, this study stated that the situation the person is in and the interaction between person and situation, in this context defined as the interaction between the workforce and the workplace are among the important features of a positive psychological environment. In order to create a great workplace companies such as Google use creative spaces for its employees to keep the interaction level high. In many offices, these spaces are called casual spaces, or third spaces and they are specifically used for small groups to connect and interact.

⁸⁷ www.chairoffice.co.uk/10-of-google-s-best-offices-from-around-the-world. Accessed on 21.04.2021.



Figure 30. Google office in Moscow, Russia⁸⁸

Figure 29 is Google’s office in Moscow, Russia. Google has provided a pleasant open space/cafeteria for its employees to have the opportunity to interact and mingle. The question here is how to keep such a space safe during the pandemic. As mentioned in 9.2.2, keeping the operational metrics against COVID-19 is one of the most important elements during the pandemic. Providing test lines when entering the workplace, providing alcohol-based hand rubs, disinfections, tissues, touch trash cans, disposable towels for workers to clean their work surfaces and other hygienic considerations can help workplaces in providing a safe environment for their employees.

COVID-related updates and trainings

Another important aspect of a human-centric approach is to provide up-to-date education and training on COVID-19 risk factors and provide a forum for emergency communication plans and for answering the employee’s questions and concerns.

⁸⁸ <https://officesnapshots.com/articles/what-makes-googles-offices-so-googly/> - accessed on 21.04.2021.

8.4.2 Operational Metrics

The operational metrics are important part of future offices since facility management and cleaning processes need to go through adaptations in light of the new measures. Some operational adaptations are minor and some major, but most organizations can easily implement operational metrics to lower the infection risk yet provide an interactive workplace for their employees. This study offers the following operational metrics to implement a hybrid way of working for its case study and other organizations in which hybrid way of working is practiced.

Installation of hygienic equipment such as sanitizers and ventilation systems

Steps need to be taken to ensure that additional hygiene practices become common place in the office. Hand sanitizing units and antibacterial wipe dispensers are low cost, easy installations and will be essential in combatting the spread of infection. In order to establish a hygiene system, organizations should consider improving ventilation in the building, in consultation with an HVAC professional, based on local environmental conditions and ongoing community transmission in the and make sure the air is purified across the organization. The other ways to make sure the quality of air is appropriate is to properly exchange the air, apply filter or keep the windows open.

Office space planning

As in the case of this thesis's case study of the financial institute and as in many other organizations, hot desk policy was used commonly in past years. Due to the current pandemic, hot desk policy should be avoided, and open offices need a new space planning. Soundproof partitions could be a cheap and easy solution for dividing open office spaces into more controlled areas. By using soundproof partitions which are effective for soundproofing due to the nature of their construction organizations can also reduce the environment noise.

Implementation of test lanes

As mentioned earlier in 8.3, providing test lines when entering an organization, is a way to control the everyday situation of the workplaces. This study advises organizations to implement special spaces for rapid tests at the entrances. This is a fast

and cheap way to control the situation. The test line spaces could be easily created by dividing the existing lobby area using partitions.

Registration and tracking systems

Another cost-efficient way to control the current situation at workplaces, especially in the canteen or open third spaces is to apply check-in QR codes at the tables. The employees can scan the QR codes when seated and in case of any reported infected cases, they will be informed via provided communication means.

Installation of signs and COVID-related measurements

Usage of floor markings in elevator lobbies and near the entrance to escalators to reinforce social distancing is another cost-efficient way to minimize the risk of COVID-19 infection. Organizations can also place decals inside the elevator to identify where passengers should stand, if needed.

Use of IoT

IoT has dramatically changed the way facilities are operating. With IoT, no error should be missed in the systems and faults should be immediately detected on computer servers. The problem will then be communicated with the related team and the alert initiates the fix. Masses of data are being collected by these systems and should be shared within various parts of a building's system, ultimately reaching the managers responsible for that specific issue.

IoT can be used in organizations to gather and report any data. During the pandemic, IoT can be used as a tool to gather the result information of the entrance Covid-testing lines and convey them to the related health center of the organizations. The second usage is to implement a counting system of the number of employees present at work at a given time to keep the amount in a safe range. Other uses of IoT could be in reporting of the number of infected or sick people at a time in a workplace to health departments. Tracking and reporting the health status of the employees is important since necessary implications can be established and implemented when the numbers are reaching a peak of crisis in an organization.

9 Will offices survive?

As discussed in the previous chapter, this study's chosen working model of "hybrid" requires some changes in the workplaces to reduce the risk of exposing the workforce to COVID-related infections. An interesting topic for future studies suggested by the author of this study is whether the offices will survive and how would the newly built offices look like?

Nicholas Bloom⁸⁹, suggests that offices will survive after the pandemic, but they will certainly look different. Bloom mentions that most organizations that were interviewed are thinking about halving the density of their offices, which would result in increasing demand for office space, especially when factoring in social distancing measures. A very interesting point mentioned in this study is that companies with offices currently in skyscrapers will likely shift towards other types of buildings due to difficulties in mass transit via elevators under COVID-related measures and social distancing.

It is obvious that this concern will remain valid until the world recovers from the COVID situation, but since learning from the past is important for a foreseeable future, organizations should err on the side of caution and provide safe environments in case the future brings another pandemic. Bloom suggest a solution is for the firms to shift their attention from downtown skyscrapers to more horizontally spacious areas, such as campuses. This shift will also benefit the workforce who commute in their own vehicles, which is another important factor to lower the risk of infection during any pandemic, as there is likely to be more parking space available.

⁸⁹ Bloom, 2020

10 Implementation Change Management and rethinking how work is done in Hybrid working models:

Change management in its simplest description means the management of change and development within a business or similar organization. Different design aspects, such as necessary functionalities, various user needs, facility equipment and hygiene criteria, social criteria and the human aspect of workforce, need to be considered while implementing change to hybrid working models.

As the restrictions regarding the pandemic is slowly being lifted, the transition to a hybrid working model and getting back to workplaces may make some employees feel anxious about returning to the office. For this reason, leaders will need to consider change management criteria to create a smooth transition to the worksites. In this case, a training program and workshops could be provided by managers to bring everyone to the same understanding level. As mentioned earlier in 8.3, it is important to advise all employees and make them aware of their responsibilities against COVID-19 such as promoting regular hand washing, usage of sanitizers, Encouraging the workforce to stay at home if they are sick, discouraging the use of other employee's belongings and many more new strategies to cope with the current situation.

11 Conclusion:

In the midst of the Covid-19 pandemic and its associated consequences, ways of working have drastically changed for many organizations. A significant shift of transformation from office-based ways of working to a system of WFH has happened. The pandemic has left office buildings mostly empty and raised uncertainty regarding working models in a post-COVID world. This study has used a mixed methodology to fulfill the aim of understanding which working model is the most optimal working model for beyond the Covid-19 pandemic.

After a presentation of an extensive literature review and analyzing the existing surveys, this study has provided an anonymized survey of the workforce of various departments of an Austrian financial organization, inquiring about their working styles, motivations and preferences during and after the pandemic.

As the result of the mixed methodology undertaken by this study, a hybrid working model has been chosen as the most optimized working model for the most efficient outcomes that consider the employees' demands. The assessment of the results has shown that most employees tend to be more productive in a hybrid working setup.

In order to develop a desirable hybrid working set-up, organizations need to consider the psychological needs of the workforce and implement different approaches to boost the power of the organization to achieve the best outcome. Stress reduction by the deployment of different psychological methodologies, such as using color psychology, creating healthier socializing setups, creating a safe office environment and establishing a more innovative and digital workplace, are among the ways to derive the most effective working methods for successful outcomes during the pandemic and beyond.

In the end, a hybrid version of working is found to be the best working practice to optimize outputs, to boost the mental wellbeing of the workforce and to maintain the profits of the stakeholders.

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